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# TRANSACTIONS

OF

# THE ESSEX

# AGRICULTURAL SOCIETY,

FOR

## 1850.

PUBLISHED BY ORDER OF THE SOCIETY.
DECEMBER, 1850.

SALEM:
PRINTED AT THE SALEM GAZETTE OFFICE.
1850.

1.

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SALEM:

*Printed at Office of Salem Gazette and Essex Co. Mercury.*

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Sci 1635.9.5

From Charles L. Blair,
of Cincinnati.
Class of 1855.

# ADDRESS.

## BY CALEB CUSHING.

*Mr. President and Gentlemen of the*
*Essex Agricultural Society:—*

It would be presumptuous on my part, to think of addressing you on matters of practical agriculture. I choose rather to invoke your indulgence for some appropriate reflections of another class.

Allow me, however, in the outset, whilst congratulating you on the happy reunion here of so many members of the Society, to give utterance to a common grief, in view of the absence of one, who, honored and esteemed by the community at large, was more especially dear to you, both as an associate and as a friend. I allude, of course, to your deceased Vice President, the Hon. Daniel P. King.

I have known Mr. King well as a public man, and in that respect can speak of him with the precision of personal observation. As a statesman, indeed, his memory now belongs not to our own Commonwealth only, but to the whole Union.

He owed to the accidents of birth and of circumstances but this,—that he was enabled to pass into the public service without going through that apprenticeship in active life, or training in the learned professions, which, though it sharpen the faculties, and enlarge the sphere of knowledge, yet has a tendency to leave the heart hardened in the conflict of human passions and interests, and the mind sophisticated by the habit of seeking for arguments to maintain an assumed opinion or side, in the stead of the unprejudiced exploration of the depths of supreme and eternal truth.

In this, he was favored by fortune: the rest was all his own:—

opportunities of education and mental formation faithfully improved,—scholarly accomplishments,—a graceful and ready eloquence,—courteous bearing,—candor of judgment,—a spirit manly and generous,—firmness of tenet, softened by moderation of temperament,—justness of principle,—philanthropy in sentiment and practice not in loud profession,—religion of the heart as well as of the head and of the outward life,—equableness of general worth,—constancy and uprightness in the performance of all his duties, whether to himself, his country, or his God.

Add to which, that, in him, conscientiousness of political conviction was free of that bigotry of party, which in the narrowness of its myopic perception looks on a difference of sentiment as a crime; and his earnestness of execution in the line of his convictions was unaccompanied by that common form of party action, a calculated and self-interested intolerance.

Thus it was, that he rose to, and well discharged, public functions of high eminence, first in the domestic government of the Commonwealth, and afterwards for a series of years as one of her Representatives in the Congress of the United States. His premature death, in the vigor of his age and of his faculties, has cut short the career of a wise, good, and patriotic man, who, had he been longer spared to us, would have continued to win true glory in the honorable service of his country.

Of the private virtues of Mr. King as distinguished from those qualities which have marked his political life,—of the excellence of his character as a son, a husband, a father, a fellow-citizen,—it would be unbecoming for me to speak in the mere cold terms of public eulogy, here, in the midst of those, by whom his memory is cherished, and his death deplored, for considerations higher, and more sacred, than all of respect or of admiration, which gathers around the name of the departed statesman.

But Mr. King was a farmer, also, with a strong predilection for agricultural pursuits, showing by the successful management of his own ample estates, how science may be combined with practical skill; and in that, his professional and official relation to you, justly earning the confidence and esteem of the Society.

Gentlemen, there is, in my estimation, no condition of private life more useful to the community, or more honorable to the individual, than the cultivation of the earth. I propose, in continuation, to develope this idea, and to exhibit the relations of land, its ownership, and its cultivation, to the material wealth of nations, to their moral and political welfare, and especially to the prosperity and happiness of these United States.

It is impossible that any American should call to mind the history of his country, and look abroad on its present condition, without feeling a sentiment of exultation in the remembrance of the one, and of pride in the contemplation of the other.

It may be, that something of exaggeration enters into the sentiment, it may be that the frequent expression of it has a sound of boastfulness to the foreign ear; yet, as Mr. Everett truly and well observes, the feeling and the manifestation of it have been most natural to us of this generation, who saw eminent men of the revolutionary struggle still lingering among us after the nation had already grown into surpassing greatness, thus prolonging our heroic age even into the present time.

This feeling is the more natural, inasmuch as we ourselves are the witnesses of a visible, yet marvellous national growth; of populous cities, filled with monuments of art, which have sprung up as it were by enchantment from the bare face of the wilderness, with the suddenness, but without the transientness, of one of the vast oriental encampments; of great states, with their thronging millions of inhabitants, appearing in wide lands, where the first furrow was ploughed in the virgin soil by the hands of our very fathers; nay, of an empire, broader than Macedonian king or Roman general ever ruled, rising out of the earth as if at the stamp of our feet.

We see that it is not an empire only, but a people, standing before us, colossal, glorious, sublime in its supernal majesty, with the aureola of divinity flashing from its brow. For that people has the highest of the patents of nobility to show for itself, as the Spaniard phrases it, namely, its works; it has taken its knightly spurs on the field; it has gained its blazon of arms in

the council-chamber; it is the child of its own achievements. And in thus learning to become great, it has learned the harder lesson to be great; for whilst other nations are struggling in vain to establish free institutions, wildly tossing their limbs in the throes and convulsions of mingled hope and fear, only to sink down again into the death-like torpor of despair, we, on the contrary, led forward by those great men among us, whose solid minds are alike unshaken, whether by the "vultus instantis tyranni" or by the "civium ardor prava jubentium," have, amidst difficulties unexampled, held on our course in conscious strength, proudly dashing behind us the troubled waters of discontent and disunion.

Well, therefore, in such a time as this, might republican France look with admiration at the spectacle of the regular working of the institutions of this country, when the conqueror of many a well-fought and hard-won field of battle bowed his head at last before the great conqueror, death, and the supreme power of the Union passed, in tranquillity and peace, to the hands of one, having indeed just titles to respect, but not of a name so identified with great events, as to make the heart throb and the blood run thrilling through the veins, like his predecessor, and not therefore equally sure of the spontaneous deference of his countrymen.

And well, therefore, may we say, to the American Union, in the exquisite words of one of the sons of Essex :—

> Hope of the world! May each omen of ill
> Fade in the light of thy destiny still!
> Time bring but increase and honor to thee,
> Land of the beautiful, land of the free!

Nevertheless, it may be right for us to inquire, how much of all these grand results, of this rapid growth in power, of this happy combination of liberty with order, and of the organic perfection of our political system, is due to men, their race, character, spirit, institutions, and how much to other causes above or beyond all human influences, and what those causes are.

Gentlemen, we hear much in these latter days of the Anglo-Saxons, as if it were their blood in us, which makes or explains the greatness of the United States.

Now, I am prepared to concede all its due influence to this the Teutonic element in our composition; but no more. I cannot shut my eyes to the action of the Celtic races, Spanish, French, and Irish, on the condition of America.

The characteristic of the Anglo-Saxon stock is individualism:—in the man, reliance on self, exclusive regard for self, personal independence, love of liberty, as it is indefinitely called among us, by which we mean, love of individual power; in the society, separate dwellings, collection into small political groups or communities, quick spread over the surface of a given country, occupation of land.

But in men, as in things, each specific quality excludes its opposite. Therefore, in the Anglo-Saxon, with self-reliance and self-regard, comes disregard of the rights and feelings of others, as illustrated in that habitual violation of contracts among us, which is more or less sanctioned by law and by what is called public sentiment.

Love of personal independence and individual power is, of of itself, a complete dissolvent of society. Therefore, again, among the Anglo-Saxons, or wherever that element exists largely, the central power is weak, authority is diffused among the parts, government is carried on, or checked and controlled in its action, by voluntary associations, clubs, and political parties, which tyrannize in their own way.

In religion, protestantism takes the place of catholicity, that is, unity of church disappears, and there follows infinite subdivision into fragmentary sects, which every where profess, but nowhere tolerate, freedom of belief.

In respect to industrial pursuits, as each man is for himself, with freedom of labor there is also freedom of capital; and as the employed rejects or imperfectly admits the idea of obligation to the employer, so also the employer feels imperfectly the sense of obligation towards the employed; and while there is much talk of liberty, there is comparatively little thought of either equality or fraternity; and the dissolution of co-relation, thought it involve bankruptcies and adulteration of commodities in one class, with pauperism and depredations on property in the other, and frequent hostility between both, yet comes to be deemed the sum of human happiness.

His passion is to occupy land; but in the indulgence of it he is carried away by individualism, and so he takes wherever he can, without punctilious regard for the rights of property in others; and, as he is in temper unsocial and repellent towards other races, he exterminates or expels the previous occupants.

In a word, among Anglo-Saxons, the federative principle obtains; the centrifugal force is stronger than the centripetal; and the society perpetually tends towards anarchy and dissolution.

Accordingly, there was no such thing as permanent and well ordered general government among the Anglo-Saxons, until the Norman-French conquered England, and infused into the society a portion of the Celtic elements of cohesion by mutual relation or co-dependence, and centralization of political authority. Then, and not until then, did Britain become a power in Europe.

Now, is it because of the Anglo-Saxon blood and character of the primitive settlers of these United States, as manifested in their political tendencies and in their religion, that these United States became and have continued to be a great people?

I reply, no: race and blood, with inherited instincts or habits belonging to them, determined the quality, not the fact, of greatness. The proof of which is, that the Spaniards, a Celtic race, with a genius the opposite of the Teutonic, with centralization of political ideas, co-dependence of social habits, and catholic unity of religion, yet in less time than the English, and with greater obstacles to overcome, established a more magnificent empire in America.

It required but one hundred years for the Spaniards to bind together the two continents in one powerful state, extending from ocean to ocean, and from Sante Fe in the North to Valdivia in the South, through seventy-five degrees of latitude; to establish definite and equitable relations between the conquerors and the conquered; to christianise the latter; to create in all that vast region rich seaports of maritime commerce; to build up refined and populous interior cities; to organize productive industrial enterprises on the largest and most profitable scale; to construct edifices and establishments of religion, government, military defence, education, and philanthropy,

such as to this day exist nowhere else in America. It needs only to compare what Spain did in America in the sixteenth century with what England did in the seventeenth, and to contrast the condition of Spanish America in the year 1600, with that of British America in the year 1700, to dispel the common delusion among us, which, from partial views and a pardonable national vanity, assumes our superior and peculiar intrinsic aptitude for colonization and for empire.

Whoever examines carefully the history and condition of the Western and Northwestern States, and sees how, at a time when the English still timidly clung to the Atlantic sea-coast, and, owing to their repellent qualities of race, were perpetually at war with the Indians, at that very time the French, on the other hand, had implanted their ideas, their authority, their language, and their religion, among the numerous and powerful tribes of the West, from Canada all around to Louisiana,—whoever, I say, considers this, will be inclined to think, that it was not any particular line of policy, nor any wide-reaching ideas, nor any intrinsic superiority of blood, on the part of the Colonies themselves, but the contingencies of a war in Europe, which decided the question, whether the predominant influences in North America should be English or French, Teutonic or Celtic.

We, in New-England, have been accustomed to take a still more contracted view of the question, and to over-estimate the influence exercised by the peculiar ideas of the Puritans in the colonization of America: unjust in this to the Hollanders of New-York, to the Huguenots of Carolina, to the Catholics of Maryland, to the Cavaliers of Virginia, and to the Irish in all parts of the United States. That religion was not the pivotal fact in the successful colonization of the United States may be plainly seen by the rapid growth, in our day, of the Australian Colonies, which, though unable to boast of any exemplary purity in religion or morality, have yet advanced faster in population and production than did the Anglo-American Colonies.

What, then, is the explanation of the rise, greatness, wealth, prosperity, freedom, and stability, of the United States? I have

no hesitation in saying, that, in my opinion, the main-spring of all this is land. The abundance of land has been the primary fact in the advancement of Spanish America, Portuguese America, French America, and British America, as it has in that of Australia.

I lay down the following series of propositions, in elucidation of the subject:—

1. The possession and utilization of land are the natural foundations of all society, because, without land, and its productions, life is difficult and precarious, if not impossible. In the position thus broadly stated are included, of course, the natural products, whether vegetable, animal, or mineral, of the air and water as well as the earth.

2. Manufacture, which is the modification of these products, and commerce, which is their distribution by exchange, are secondary in order of time and of necessity to the occupation of the earth, which alone furnishes dwelling-place and food, the prime exigencies of life, and which also furnishes the objects of manufacture and commerce.

3. In all societies, land is the chief conservative element of the society, of its institutions whatever they may be, and of its particular spirit and moral identity. Whether the government be aristocratical as in Great Britain, or democratical as in the United States, its distinctive quality is more particularly prominent in the agricultural interest.

Hence it is that the great empire of the East, whose robust identity of type has defied all the chances of time, proof alike against external violence and internal corruption for thousands of years,—I mean China,—has the unshaken basis of its greatness laid in agriculture, universally recognized by its sages and its statesmen as the noblest of their ancestral arts, the palladium of public stability, the inexhaustible source of national prosperity, second in estimation to the cultivation of the mind alone: in testimony of which it is, that the one great occasion of the year, on which the ruler of three hundred millions of men descends from that solitary elevation of his, which is half the throne of a sovereign and half the shrine of a demigod, to mingle in person with his people, is a solemn agricultural

pomp, when he himself guides the plough in the furrow as an example and a sign to the universe.

4. Whatever may be the political name of a government, it is monarchical in spirit and fact, if the land be held chiefly or in great part by the sovereign, as in Egypt, Russia, or India; it is aristocratic, if it be held in large estates by individuals, as in Great Britain or Hungary; it is democratic, if it be extensively distributed among the people for cultivation, as in France or the United States.

5. A political society will be stable, or otherwise, according to the predominance in its composition and control of those interests, which are directly associated with the earth and the natural productions of land or sea, or of those which consist only in the modification or distribution of natural productions.

Accordingly, countries, like Egypt, India, China, whose primary interest is agriculture, seem to possess indestructible vitality. Persians, Greeks, Romans, Arabs, Turks, have, by successive waves of invasion, broken down the monuments of art in Egypt, but not her prosperity; Mongols and Manchus have expended their lust of plunder on the fertile soil of China in vain; Tartars and English have in like manner labored unsuccessfully to exhaust the wealth of India: for if Man be powerful to waste and destroy, Nature is yet more powerful to renovate and repair.

6. The tendency of agriculture is to distribute men over the country at large, of manufactures and commerce to accumulate them in great masses on given points. Of course, in the former will be found the traits of more simple habits, of a healthier state of the moral and physical man, and of less mobility of ideas and character: whilst in the latter will be more civilization of mind and body, but less vigor and individuality of stamp; more accomplishment in the fine arts, but less virtue; more new ideas, but less of reliable ones; emotions evanescent, though vivid; movement, change, instability.

7. If, in a political society, which is wholly or in chief part agricultural, the community be divided into two classes, one owners of the soil and the other mere laborers, whether that state of things result from conquest, as of England by the Nor-

mans, and of Ireland by the English, or from the introduction of laborers foreign or of another race, as in our Southern States and the West Indies,—then, one of two things happens: Either the owners and laborers are legally independent of each other, and associated only by the contract of hire, in which case pauperism is rife;—or the two classes are mutually co-dependent, in which case there is no pauperism, but, to compensate for this, the laborers are in the condition either of vassalage or servitude.

In all the known, or at least in all the existent, forms of political society, this is the terrible alternative, attending unequal distribution of property, namely, either serfdom, or pauperism. And the great question of the day in Europe is, whether there be any middle term;—whether it be possible so to reconstitute society, that the rights of capital and labor may be reconciled, and that, with the employer free to engage the employed or not as he pleases, and the employed free to engage with the employer or not as he pleases, still the employed shall at all times have work at a price adequate for his subsistence. That is a social problem not yet experimentally solved.

8. In proportion as productive land is abundant, and easy of acquisition by all the members of the community, will society be sound on the main point, that is, the absence either of serfdom, or of pauperism, and of the criminal classes created by the unequal distribution of limited national wealth. If, in that profusion of productive land, there be nothing to check the natural progress of population, or it be supplied by colonization, then will there be a rapid growth of the country in power. If the land be all taken up, if it be deficient in quantity, if manufacturing and commercial interests have overgrown the agricultural, then is the condition of the country abnormal; and the continuance of its prosperity is dependent on circumstances foreign to itself, and beyond its control; and the accidents of political change may at any moment produce its decline or downfall.

In saying this, let me not be understood to speak in disparagement of manufacture and commerce, those hand-maidens of agriculture; but only as attributing to each that which is,

in my estimation, its everlasting place in the great scheme of human affairs, and in the welfare of nations.

The higher comparative estimation, in which land has been held by some of the great states of ancient and modern times, such as Egypt, Lacedæmon, Rome, and feudal Europe, has not been, as many have erroneously supposed, a mere prejudice of class, but the expression of a sentiment or conviction in favor of what they deemed the material element of their greatness and the safeguard of their nationality. The old political communities, whose industry was more exclusively manufacturing or commercial, as Tyre, Carthage, Athens, Palmyra, each with its narrow territory and its massed civic population, shone for a brief season with unsurpassed and dazzling brilliancy in wealth, learning, and art, and then passed away like the blaze of a meteor, which leaves only the reflection of its transient lustre upon the page of history, and peradventure some half-buried monumental stones to mark its resting place on earth. Florence, Pisa, Genoa, Holland, are examples of more modern date. Britain is no exception to this great political law; for, though she be pre-eminent in manufacture and commerce, yet the ruling class there is rooted in the land; it repairs to the city in the pursuit of power and of pleasure, but its rich abodes, its household gods, the birth-place and nurture of its children, the graves of its progenitors and itself, are in the country; and when the earth of England shall have ceased to produce for her its corn, its coal, and its iron, and the landed interest be no longer potential in her government, then for her also it will need but the accident of a battle to decide her fate.

Gentlemen, applying these propositions to the main question, I say, these United States are, *as a whole*, and always have been, chiefly dependent for their wealth and power on the natural productions of the earth. It is the spontaneous products of our forests, our mines, and our seas, and the cultivated products of our soil, which have made, and continue to make, us what we are. Manufacture can but modify these, commerce only distribute or accumulate them, and exchange them for others, to gratify taste or promote convenience. Land is the footstool of our power; land is the throne of our empire.

Generation after generation may give themselves up to slaughter in civil or foreign war; dynasty follow dynasty, each with new varieties of oppression or misrule; the fratricidal rage of domestic factions rend the entrails of their common country; temples, and basilica, and capitols, crumble to dust; proud navies melt into the yeast of the sea; and all that Art fitfully does to perpetuate itself, disappear like the phantasm of a troubled dream; but Nature is everlasting; and, above the wreck and uproar of our vain devices and childish tumults, the tutelary stars continue to sparkle upon us from their distant spheres; the sun to pour out his vivifying rays of light and heat over the earth; the elements to dissolve in grateful rain; the majestic river to roll on his fertilizing waters unceasingly; and the ungrudging soil to yield up the plenteousness of its harvest year after year to the hand of the husbandman.

He, the husbandman, is the servant of those divine elements of earth and air; he is the minister of that gracious, that benign, that bounteous, that fostering, that nourishing, that renovating, that inexhaustible, that adorable Nature; and as such, the stewardship of our nationality is in him.

God has in all times vouchsafed to our country ministers of religion, whose hearts and whose life were touched as with holy fire from his altar; soldiers, of whom the very name sounds in the mind's ear as a trumpet-call to battle and victory; statesmen, the glory of whose eloquence, whose wisdom, whose patriotism, will descend to future ages, obscuring in the effulgence of its light all Greek and Roman fame. God has made us of that Anglo-Saxon race, which Tacitus commemorates of old, as inclined to shun the crowded city, and to choose its abodes by the sparkling fountain, or along the green glades, or in the solemn depths of the forest; whose passion is land; whose individualism, whose genius of separation and self-action, whose rural tendencies, render it especially apt for that period in the career of a political community, when land is super-abundant with it, and when the uncultivated earth is to be reclaimed to the dominion of man. God has endowed us with courage, energy, activity, genius, invention, industry, love of knowledge, improvement, and virtue, at least equal to

those of the most favored members of the human family. God has blessed and protected us in our efforts to establish and maintain wise and good institutions of government, and has enabled us to defend them against all enemies, alike on the ocean and the land. But God in his great mercy has also given us a country, geographically speaking, without the singular features and situation of which, all the wisdom, virtue, and sacrifices of our fathers and ourselves would but have served, like those of Swedish Charles,

To point a moral, and adorn a tale;

and without which the specific qualities of our parent-stock, their instincts of personal independence, severance of interests, diffusion of authority, repellence of race, exaggerated self-confidence of judgment, intolerance of any opinion, tastes or habits differing from their own, and their very avidity for land, would all have proved to be the elements of dissolution and destruction, rather than of wealth and power.

We of the United States possess a portion of the earth, in which all the natural sources of wealth, mineral or vegetable, abound; which constitutes (approximately) the whole of the temperate zone of this Continent, and is therefore highly congenial to animal life; which by the configuration of the sea-coast abounds in harbors; which contains interior seas; and whose superficies is so disposed, with numerous moderate elevations, with no conglomeration of lofty mountains, but with extensive gently inclined planes, that it contains a larger system of rivers, and a greater proportion of tillable lands, than any other country in the world, except possibly Russia and China.

Compare, for illustration, with the condition of the American Republic in this respect, the contrary state of things in the Mexican. Such is the configuration of the coast of Mexico that she has almost no good harbor on the Atlantic ocean. Vera Cruz is but a road-stead along the sea-beach, imperfectly sheltered by a reef of rocks. You cannot reach the interior of the country, and the seats of its natural resources and power, from either sea-coast, without ascending to a height of seven thousand feet in a line of one hundred miles, and the whole

surface of the earth is a confused mass of mountains. Of course, navigable rivers, canals, and railways, either to connect together the interior parts of the country, or to connect them with the sea, are impossible. Of course, also, the relative proportion of arable land is much less than it is in this country. Moreover, as the climate is dry, and the running streams few and small, therefore, of the land in general only those portions can be cultivated profitably, which are susceptible of irrigation. If God had cast the lot of our fathers in that part of America, not ours would be the mighty ships, which now bear our flag, and the fame of our greatness, and the rich productions of our soil, our fisheries, our work-shops, and our looms, to the uttermost bounds of the earth;—not ours, the floating palaces of the Hudson, the Delaware, the Ohio, and the Mississippi;—not ours the wonders of mechanic art in the use of the steam engine;—not ours, the iron bands of so many railroads, which seem as if intended to bind together indissolubly the East and the West, the North and the South;—not ours the great forests and vast prairies of the West, which invite and satisfy the expansive energies of our race, which draw off the superfluity of our population, which constitute the safety-valve for all the pent-up passions and explosive or subversive tendencies of an advanced society, and which in the asylum and aliment they afford to the discontented or unhappy of other lands, are serving to hurry us on to the very pinnacle of earthly power.

As, therefore, we are great, wealthy, prosperous, and powerful, so are we, despite of transitory conflicts of interest, peaceful and secure in our political relations, because of land, more land, exuberance of land. The Anglo-Saxon must have room in space, and his own way in opinion. The colonists of Massachusetts-Bay had spread themselves over half the surface of the State, at a time, when their aggregate number did not exceed the present population of one of our smaller cities; and how little of dissent, either religious or political, they tolerated, we know well here in Salem. The people of the English Colonies felt crowded on the eastern slope of the Alleghanies, and, though most of the land was yet untrodden wilderness, they could not find space among them in which to suffer the

residence of a few broken bands of Indians. After the establishment of the Federal Union, they swarmed over to the western slope of the Alleghanies. They were not satisfied there, until they had obtained Louisiana, and occupied the entire Mississippi Valley. And still, with their strong instincts of expansion, but not of assimilation, they drove before them the surviving remnants of the Indians. There was more land yet ahead of them, and they pushed on to Texas, Oregon, New Mexico and California.

Where is all this to end? I will not undertake to foreknow; but I see that the continual occupation of new lands, and successive acquisitions of territory, are the manifestations and the effect of the particular genius and personal character of the people of the United States. We satisfy in this the inborn exigencies of our nature, just as when we eat or drink. Give scope for the free action of our characteristic national qualities of activity, expansibility, individualism, love of land,—and all is well: check it, stop it, shut it up, force it back on itself, and you will discover that the letter of a written Constitution is quite secondary in its agency on the integrity and peace of the American Union.

Gentlemen, we of the State of Massachusetts, unlike the United States as a whole, have reached that point in our social career, where agriculture is overtaken, and perhaps passed, by manufacture and commerce. That is one of the critical periods in the life of a community. Far be it from me to say any thing, here or elsewhere, to discourage the ardor of our advancement in mechanic art, in manufacture, or in commerce. Nor, on the other hand, do these need to be stimulated by applause; for their weak side is a tendency to hurtful excess of production by means of machinery and of credit. But the interests of the agriculture of Massachusetts do need to be stimulated by public exhortation.

Let those of us, then, who feel stifled in the air of over-full cities, to whom the fresh breezes of the country, its green fields, its fair hills and bright streams, its woods and its lakes, and its ripened promise of the harvest, are never-ceasingly dear,—let us turn with fonder affection to all there is left to

man of the charms of Eden. We may fail thus to get something of city graces: we shall keep the more of country strength. Let us hold fast to the sheet-anchor and stay of nations. Let science be applied to augment the productiveness and value of the agricultural lands of the Commonwealth, as its population increases, and other interests attain great relative weight: to which end, the State should be called on to establish an Agricultural School worthy of her wealth and fame. If our soil will not produce, nor the climate ripen, those great staples which supply our foreign trade, cotton, tobacco, sugar, wheat, rice, yet other products of the earth are not wanting here, as the means and the subject of agricultural industry and prosperity. Let it never be forgotten that agriculture is the conservative element in our social system, under whatever name of party that interest may for the time being appear. Finally, if we should ever incline to doubt as to the relation of agriculture to life, to the character of men, and to the destiny of nations, let us look back on the history of our country, and remember how many of its greatest generals, like Washington, Jackson, Taylor,—how many of its greatest statesmen, like Jefferson, Madison, Calhoun,—to say nothing of living men,—have been the production and growth of rural life, and have clung, with invincible tenacity, amid all the changes and chances of the loftiest flights of greatness, to the pursuits and the interests of their mother-earth.

# REPORTS, &c.

## INTRODUCTORY REMARKS.

The Cattle Show and Fair, by the Essex Agricultural Society, was holden at Salem, on the 26th of September. A north-east storm operated much inconvenience in the movements of the day. The number of spectators was much less than it otherwise would have been;—but enough to indicate the strong interest felt by the public in the objects of the Society. The show of animals was equal to that of any former year;—notwithstanding the unfavorable circumstances under which they were viewed, the general remark was, that this part of the Exhibition was well sustained. The ploughing match came off at the hour appointed, more than twenty teams engaging in the contest, no competitor, it is believed, being deterred by the inclemency of the weather, from appearing on the field, and completing his work. The entire performance was highly creditable to the skill and perseverance of those engaged. Most of the ploughs used were of the description that have been best approved, for several years, in the County of Essex. A plough of new pattern, called the Michigan Sod Plough, turning two furrows, one upon the other, was exhibited, and operated favorably. Judging from the slight examination in our power to give it, it appeared to be worthy of further experiment. If we do not mistake, it will be found, for many purposes, a highly useful implement.

The display of articles of domestic manufacture was not as large as on some former occasions; probably diminished by

the state of the weather, and by the requisition found necessary, of entry being made on the day previous. The plan of charging a small admission fee, answered the purpose intended, by keeping the rooms in a condition to accommodate those who wished to see and examine what was exhibited. It will unquestionably be found a salutary regulation, in fair weather, with a numerous attendance.

The show of fruit was very fine, superior to any before seen in this County. For the success in this department, the Society are under great obligations to our Horticultural friends in Salem, the exhibition by the Essex Institute being united with that of this Society.

For an examination of the animals and articles presented, and the premiums and gratuities awarded, reference may be had to the reports of the several committees;—which do or should contain a complete specification of all presented, and all awarded, together with the reasons of the award;—that those who read may have as full an understanding of the awards, as those who saw the objects for which they were made. It cannot be expected that committees will view with the eyes of competitors;—if they did, it would be a hopeless task to expect any awards. Disinterested as committees are always required to be, and selected for their special qualifications for the purpose, it is desirable that they shall continue to command, as they have heretofore received, the confidence of the public;—and especially of the farmers whose interests they are anxious to promote.

The premiums awarded are but a small part of the objects of the Society. The information elicited and disseminated is the grand purpose of the organization. This is done through the medium of the Reports. It cannot therefore be too strongly impressed on the minds of competitors and committees, that on the fullness and accuracy of their statements and reports, will mainly depend the usefulness and reputation of the Society. In regard to some of the objects upon which reports are to be made, it is not easy to say any thing new;—nevertheless, if worth examining at all, they are worthy of description. "Line upon line, and precept upon precept," will be found to make salutary impressions in agriculture as well as in morals.

An increased interest has been given to the annual meetings of the Society, for several years, by the presence of distinguished gentlemen from other Counties. Such an interchange of civilities is worthy of encouragement, and may be the means of much improvement. Within the year, more than forty have been added to the list of members. When the facts are taken into view, that there are many towns in the County, from which no additions have been made for the last twenty years;—and that those who were then members have now passed their period of active labor, and that the population of these towns in the mean time has nearly doubled: it must be apparent, that there are many, who would find their account, in uniting their efforts, for the advancement of a cause, admitted by all, to be the basis of public prosperity. Much pains have been taken to establish a library, for the use of the members, which is accessible to all, and from which much good is anticipated. The time is gone by, when book knowledge is to be viewed as of no value. Books contain the essence of all that is valuable in knowledge. And he that has the skill to use them to advantage is likely to be most wise. This is particularly true of an employment that spreads itself in such an infinite variety of ramifications as the cultivation of the soil. So true is it that he who learns most in relation thereto, sees most to be learned.

It is to be hoped that the plan in contemplation for maturing a system of agricultural instruction will receive some definite form in the course of the present year. When this is done, the farmers of Essex should not be unmindful of their rights and interest in this matter.

## ON MILCH COWS.

The Committee, of whom were present J. Osgood Loring, of Andover, Eben G. Berry, of Danvers and Andrew Mansfield, Jr., of Lynnfield, make the following Report:

Nine cows were offered for premium,—two of them had calves by their side, but no statement being given with them, they were not entitled to a premium. They were both of them fine looking cows, and one of them, belonging to Seth Kimball, of Bradford, gave strong proof of her good qualities by the justice she had done to three fine looking calves, which stood by her side, and which were born at one birth. The cow presented by John Nichols, of Salem, was a superior milker, but had been kept higher than the other cows offered for premium. His statement exhibited an example of accuracy and regularity rarely to be met with, her yield of milk in pounds, being given as recorded at each milking for sixteen months past.

After a careful examination of the cows, together with the statements accompanying them, the committee were satisfied that they were all more than common animals.

We recommend that there be awarded to,—

| | |
|---|---|
| Farnham Spofford, of Andover, first premium, - | $10 00 |
| Stephen Driver, of Salem, second premium, - - | 9 00 |
| Josiah Crosby, of Andover, third premium, - | 8 00 |
| Eben King, of Danvers, fourth premium, - - | 7 00 |

It is painful to reflect, that though our own society has now been in operation over thirty years, and though premiums have been regularly offered from the beginning for the best milch cows, yet it is not known that any considerable permanent improvement has been made in the county, if even attempted. Accidental cases of superior cows have indeed happened, a few spasmodic efforts have been made to improve the breeds, and our Transactions have teemed with annual reports, drawn up with much ability, yet who has ever heard of any thing like general results? Where is the Col. Jaques of Essex county? Where is our Cream-pot breed of cows, some of which, in Middlesex, "produce nine pounds of butter in three days, on grass feed only?" where shall we find the dairy, in which the

cream of many cows united, "produces more than 80 per cent of pure butter," the process of churning "being performed in one minute," nay, "in forty seconds"?

After so direct an allusion to the splendid experiments of Col. Jaques, of Charlestown, it may not be improper to bring a few facts relating to those experiments once more before the people, and especially before the Society. They are too apt to be forgotten—and yet they ought not to be forgotten or lost sight of. That distinguished, enthusiastic breeder, (every one who means to do much must have some enthusiasm,) no sooner turned his attention to the subject, than he perceived that no reliance could be put upon accidental cases of superior cows, however superior they might be. They would begin to fall back in the second generation, and be often, and indeed generally, miserable in the third. "A good cow may have a bad calf," said the spelling book of our boyhood, and every one knows that the descendant of a good cow of no particular breed, may inherit the inferior properties only, of some near or remote ancestor. And especially when it is considered that too many are satisfied to take any and every miserable runt of a bull, it is plain that nothing could be effected in the matter of improving stock in this way. Col. Jaques heard of a noble sized cow, raised in Groton, Mass., the first owner of which knew nothing of her origin. Before coming into the hands of Col. Jaques, she was owned a while in Dorchester by a Mr. Haskins. Her cream was of such extraordinary richness that, according to Mr. Colman, it would often separate into butter by the motion of the carriage while carrying it into Boston. The whole of that remarkable breed of cows, called the Cream-pot breed, and whose products have been hinted at above, descended from this native Groton cow, by a cross with the improved Durham short horned bull Cœlebs, imported some years since, and owned afterwards by Col. Jaques. This breed of cows had reached the third generation in 1838, since which time I have not known their history.

But the facts here recited go to show conclusively, that by a judicious choice of the bull, our native breed of cows can be made to do all that cows ought to do, or ever have done any

where; while the present condition of the cows of our county, at least, proves as clearly that without attention, great attention, to the bull, nothing effectual can ever be done at improving stock. What were the results of the Charlestown experiment, made at the Colonel's Ten Hills stock farm? "I have forty cows and heifers," says he, "ten bulls and bull calves of different grades of this cream-pot breed, all raised by myself. I keep my bulls, selected as breeders, until I have proof of the quality of their offspring. My old cream-pot bull is ten years old. My Don cream-pot, from which I am now breeding with some of my cows and heifers, is three years old."

Extraordinary native cows are not wanting in every town, which can often be purchased reasonably, for making a beginning. Thus, to go no further, a few of those cited by the late lamented Mr. Colman, may be mentioned to show that they can easily be found;—one single cow being sufficient to begin with, as was the case in the grand experiment above referred to. The cow of Mr. Colt, of Pittsfield, produced 193 lbs. of butter in 148 days, and that from 1st December to 27th April! Mr. Campbell's cow, (same town,) yielded 26 beer quarts of milk per day, and Mr. Hosea Merrill's 30 beer quarts. A four year old cow of Mr. Calvin Davis's produced 225 pounds of butter in 172 days, and fatted a calf, in the year 1838. Mr. Wm. Dewey's two cows averaged for a time 14 lbs. of butter each per week, and so did Dr. Hyde's, of Stockbridge. A cow of Mr. Thomas Hodge's, in North Adams, produced 425 lbs. of butter in one year, 400 lbs. of it being made in nine months.

This list of good cows, confined indeed to Berkshire, might be lengthened almost indefinitely, both from the published and unpublished accounts. I am merely showing that there is ample opportunity to make a beginning in improvement. Never mind the pedigree: I would not undervalue it indeed, if reliable, but there is something bordering upon the ludicrous in such an array as the following, found in the Abstract of the Returns of Agricultural Societies for 1845, page 196. "Waterloo was sired by 'Bruce;' Bruce by Wellington; Wellington was sired by Sandy senior, who was bred by Mr. Paton, of Swinlees, who was never beaten. He got the first prize at Dundonold, when 14 years old. John Young."

Imposing as all this is, I should much prefer the simple story of Samuel Jaques, our own country-man, whose experiments every man of us may in effect, repeat.

It is a serious question for the Society to settle, whether they really do the good they intend, by the present method. Some think it would even be better to offer the premium for each farmer's whole stock of cows, than, as at present, for the petted one. It would be fairer no doubt. But suppose a standing offer were made to all who should repeat the experiment of Col. Jaques, with such variations as were unavoidable. Suppose a premium of $15 were offered to all who would begin with one cow now making 12 to 14 lbs. of butter, or even 10 to 12 lbs. a week, and who should drive her to some superior bull, and all her progeny for five years to come should be reared, the obviously faulty ones excepted, Would not the effort be made, and could it fail of promoting one grand object of the Society, viz: the improvement of our stock of milch cows?

How important an animal is the cow! Into how many articles of food does her milk enter! That stomach has departed fearfully from the simplicity of nature, that cannot bear milk; and yet many say they cannot bear it. Of its medical effects, it is not proposed to speak, further than to say, that one physician of eminence has remarked that it is of more value in consumptions than the whole Materia Medica, and that for persons in health, it is often better unboiled than boiled.

But for food simply, almost any thing could be spared better than milk in some of its forms. How then does it become every farmer to increase the quantity, and improve the quality. It is but lately that the attention of cow keepers has been distinctly called to the subject of kind treatment of milch cows. The reports of Mr. Payson, Mr. Caldwell, and others, have done great good in this respect. Keep this, too, before the people. It is not necessary exactly, that the cow should be separated from our parlor by a glass door only, as Mr. Payson informs us is the case in Holland. But personal attention and kind treatment she should have. So too, a warm barn, and yet not the stived and sickly underground stables where the cows are often kept in London, where they rarely if ever

breathe pure air, and are often found with tubercles in their lungs. Pure air is indispensable, even if it cannot be had without being cold. Let them be kept dry, and prevent all accumulations of dungy matter upon their hips. But cows should not be curried severely—an animal of a thin skin dreads a heavy carding exceedingly. But by using a stiff brush only, in many cases, the glossy smoothness may be secured, and the skin left without being scratched. This should be used however only where the hair is thin. The skin should be reached and invigorated every day with something, effectually but mildly. Should neat cattle have their food at three feedings in twenty-four hours, or should they have little at a time and often? The latter will answer, where we can be sure of giving it often. But I incline from observation, to favor the idea of three feedings daily. First ascertain how much they need, and keep to that, varying it only with the weather, giving more in cold than in warm weather. It is objected that they will blow upon it and leave it. This is most apt to be the case with oxen just out of the yoke,—and by the by, it is an excellent custom with many to put nothing before oxen till they have time to cool and get quiet. Cows and all neat cattle may become as regular to their three meals as swine do, and thrive as well. When at liberty in good feed, they take a full meal and then lie down; this, nature teaches, and nature may be as safely followed in the winter as in the summer.

I do not attempt to give the "marks" by which a good cow may be known. These marks conflict too much, and fail too often. If any one wishes to enter vigorously upon such a plan as has been hinted at above, a few cows can always be found in every town, and can be purchased. They may cost more than poor ones, and they ought to. But the keeping costs no more, while the prospect of improvement must be enhanced immeasurably.

The chairman of the committee on milch cows is alone responsible for the views contained in the foregoing report; but he is happy to add a few remarks communicated by Mr. Bodwell, of Methuen, a member of the committee, in answer to a request for his views on the subject; a request was also for-

warded to the other members of the committee, but from them nothing has been received. "I am of opinion," says Mr. Bodwell, "that our native breed, if proper attention is paid to its improvement, is quite as good as the foreign, or better, taking into consideration the expense of keeping. I think that much more attention should be paid to improve our native breed of cows." Mr. Bodwell does not seem to have conceived the idea particularly of experimenting in the manner I have recommended, but agrees fully that our breed may be greatly improved, by merely raising the best calves, and paying more attention to the keeping.

DAVID CHOATE, CHAIRMAN.

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FARNHAM SPOFFORD'S STATEMENT.

I offer for premium my cow, called the "Green Mountain." She is 7 years old, and is about one-sixteenth Durham, the other part is of native breed. She calved on the 9th of June. We commenced keeping an account of her milk on the night of the 18th of June. Last 11 3-4 days of June she yielded four hundred and ninety-five pounds of milk, 495 8 oz.

| | | |
|---|---|---|
| July - - - - - - - - - | 1376 | |
| August - - - - - - - - | 1402 | 15 oz. |
| Sept. 1 to 24th, inclusive - - - - - | 1060 | |
| | 4,334 | 7 |

The last 11 3-4 days of June she yielded 24 1-4 lbs. of butter, (we have milked her three times a day through the season.) The greatest yield in any one day was two pounds and nine oz. Greatest yield of milk any one day was fifty-two pounds and ten oz. In July the yield of butter was only fifty lbs., the weather being unfavorable, and feed being short. In August, commencing on the 18th and continuing one week, she made 14 lbs. and 11 oz. butter; during 13 days in September she yielded 25 1-4 lbs. butter.

This cow had no other feed than a common pasture, until

the first day of August, she was then turned into fall feed, but had nothing additional given her.

Andover, Sept. 25, 1850.

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STEPHEN DRIVER'S STATEMENT.

My cow "Helen," entered for premium, is six years old, and of native breed. I have owned her for more than two years past. Last year she was dried March 3d and calved March 28th. For some weeks after her calf was taken from her, and before she went to pasture, she gave 18 1-2 quarts of milk per day, by actual measurement, and in September following she averaged about 9 quarts per day.

This present season she went dry four weeks, and calved March 21st. The week before she went to pasture, she yielded 9 lbs. 14 oz. of superior butter, besides 29 quarts of milk sold and used in the family. Her feed was good; English hay, and six quarts of shorts per day. During the summer she has run in the common pasture. She has given quite as large a quantity of milk this year, as the last. Yesterday she gave seven and a half quarts.

Salem, Nov. 26, 1850.

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JOSIAH CROSBY'S STATEMENT.

I enter for premium to-day, my 4 year old heifer, of Durham and Ayrshire breed. She has had two calves. She dropped her last, about the last of March. During the month of June last, she gave, while running in a good pasture, an average of 16 quarts of milk per day. She has frequently given 17 and 18 quarts per day, and the quality is quite equal to the quantity.

North Andover, Sept. 20, 1850.

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EBEN KING'S STATEMENT.

The cow I offer for premium is eight years old, of native

breed. I bought her in the state of Maine, two years ago next October. She was giving then, on grass feed, eleven quarts of Milk per day. She calved the April previous. After being put up to hay, she gave nine quarts of milk per day, in December and January; after that she gradually gave less until April. About six weeks previous to her calving, she gave six quarts per day, when I began to dry her. I found it very difficult to do so, and put her on meadow hay keeping. She calved the 25th of May, 1849. After her calf was killed, I often measured her milk, and she gave fourteen quarts per day through the best of the season. In the fall she gave from nine to eleven quarts per day, varying according to the feed. In December and January last she gave nine quarts per day, after that time she gradually gave less. In May and June she gave six quarts per day. One month before she calved she was giving four quarts per day, when I left off milking her. She calved the 18th of August last, and gave from six to eight quarts per day more than her calf would take. The calf was killed when he was four weeks old; since then her milk has been weighed, and she averages thirty-six pounds per day. Her keeping has been pasture feed through the warm season; in the winter hay, with occasionally a few carrots. I have sold the most of her milk, having made butter but a small part of the time since I owned her. Her milk is of the first quality, and makes the best of butter.

Danvers, Sept. 15, 1850.

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JOHN NICHOLS'S STATEMENT.

I offer for premium my red cow, seven years old. Her feed in winter has been English hay, a part of the time Eastern pressed; since April 20th second crop, with a large bucket of shorts and beets, night and morning. In the summer of 1849, her feed was grass in gallows hill pasture, with shorts and hay at night. After September 1st she had good fall feed, without water in the field—watered night and morning only. Each of the pastures was a mile and a half from home.

In 1850 she has been pastured in a field of about one acre, near home; she has also had a peck or more of shorts with hay daily, after the grass was short. The pasture generally poor. The milk is of the first quality. She calved April 29, 1849—calf with her 11 1-2 days. Calved again March 7, 1850—calf with her 32 1-2 days. Annexed is a record of the quantity of milk in pounds given at each milking. I have allowed the same quantity each day while the calf was with her, that she averaged the week after.

From this record it will appear that in the sixteen months milking time previous to this date, she has given 15,250 lbs. of milk, or 6,100 quarts.

Of this I have sold and used 1274 quarts, at 6 cts. per quart, for - - - - - - - - - - - $76 44

And 4826 quarts, at 5 cts. per quart, - - - 241 30

Total, - - - - - - - - - $317 74

For her feed in the same time, I have paid - 104 74

Leaving a profit of - - - - - - $213 00

Her average yield for sixteen months milking time was twelve and one-half quarts.

Salem, Sept. 26, 1850.

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THOMAS G. DODGE'S STATEMENT.

The cow offered by me for premium is of the Ayrshire breed and was seven years old last spring. For the past three years she has not been dry. She calved this year, July 27th, and her calf was sold at four weeks old. About seven weeks before she calved she began to increase her milk until she gave eight quarts per day till she calved. She has given eleven quarts per day on an average.

Newburyport, Sept 25, 1850.

## ON HEIFERS.

The Committee report that they have performed the duty assigned them, under very unfavorable circumstances, it raining during their examination, which prevented their giving the heifers that minute inspection which they would have been glad to have done. Twenty-three heifers were entered for premium, and three for exhibition. Of these, three were three years old, nine two years, and fourteen yearlings. There was quite a number of heifers, other than those to which the premiums were awarded, which were large and noble looking animals, principally of a foreign or cross with a foreign breed, which the committee think much better adapted to the plough than the dairy; their milking properties not being equal, in the opinion of the committee, to some of our best improved native breeds. Some of the heifers to which premiums were awarded, were unaccompanied with satisfactory statements, otherwise they might have been ranked differently in the list of premiums.

After a full consultation, the committee came to the following decision, and recommend that the premiums be awarded accordingly.

HEIFERS IN MILK.

| | |
|---|---|
| To Philip L. Osborn, of Danvers, first premium, | $7 00 |
| " Daniel Osborn, " " second premium, | 6 00 |
| " Henry Hone, of Saugus, third premium, - | 5 00 |

HEIFERS TWO YEARS OLD.

| | |
|---|---|
| To Sylvester Cummings, of Danvers, first premium, | 5 00 |
| " Eben Hathorne, of Salem, second premium, | 4 00 |
| " John Stone, Jr., of Marblehead, third premium, | 3 00 |

YEARLING HEIFERS.

| | |
|---|---|
| To John S. Hubbard, of Newbury, first premium, | $5 00 |
| " Jesse Dame, of Rowley, second premium, | 3 00 |
| " George French, of Andover, third premium, | 2 00 |

ANDREW DODGE, CHAIRMAN.

DANIEL OSBORN'S STATEMENT.

I offer for premium my no horned Heifer. She is three years old; her calf was taken from her the 25th of May, since that time she has given from thirty to forty pounds, or from twelve to sixteen quarts of milk per day, allowing two and one half pounds to the quart. Her keeping has been common pasturing, without grain of any kind.

Danvers, Sept. 26, 1850.

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PHILIP L. OSBORN'S STATEMENT.

I offer for premium my two year old heifer in milk. She calved the middle of May last. In June and July she gave on an average twelve quarts per day, and in August nine quarts a day. Nine quarts of her milk made a pound of butter. Her feed has been a common pasture.

Danvers, Sept. 26, 1850.

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SYLVESTER CUMMINGS' STATEMENT.

I offer for inspection and premium my two year old heifer. She calved July 9th, and the calf remained with her till August 8th. The product of her milk from this last date to September 8th, was five hundred and twenty-five pounds. At the present time it is seventeen and one-half pounds per day. Twenty pounds of her milk yielded one pound of butter. Her keeping through the season has been good pasturing, without any extra feed. The pasture to which she was driven, is three fourths of a mile from home.

North Danvers, Sept. 25, 1850.

## ON WORKING OXEN.

The Committee,—present Jedediah H. Barker, of Andover, Seth Kimball, Bradford, Hiram L. Newhall, Lynnfield, William G. Brown, Ipswich, and Jervis Lamson, Hamilton, having attended to their duty, would Report: that in performing it, it is difficult to do justice to all, as so many oxen are to be tried, and the time is so short for the examination. The load, used for this purpose, was about two tons, exclusive of the wagon, which for most of the cattle was not a heavy load, and therefore there was but little whipping.

The rules of the society require that working oxen entered for premium should be over four and under eight years of age. When the question is asked by the Committee, how old are your oxen, the answer is such as the driver sees fit to give, and whether correct or not, it is for the committee to judge. In one instance a pair of cattle were stated to be six years old, when the committee were of opinion that they were nine or ten. If the rule as to age is retained by the society, it is desirable that some more certain mode should be prescribed for determining it, such as the written certificate of the owner.

The oxen exhibited this day were many of them of a good size, looked very well, and performed their work well also, while others were not well matched.

The number of entries was twenty-six, fifteen pairs only were on the ground for trial, as follows:

| | | | | | |
|---|---|---|---|---|---|
| One pair | by | Richard S. Bray, Newbury, | aged | five | years. |
| " | " | Moses Pettingill, Topsfield, | " | six | " |
| " | " | Elijah Pope, Danvers, | " | five | " |
| " | " | Jonathan Berry, Middleton, | " | five | " |
| " | " | David S. Caldwell, Byfield, | " | five | " |
| " | " | William A. Lander, Danvers, | " | seven | " |
| " | " | John Washburn, Lynn, | " | seven | " |
| " | " | John Washburn, Lynn, | " | five | " |
| " | " | Franklin Alley, Marblehead, | " | seven | " |
| " | " | William Foster, Andover, | " | five | " |
| " | " | Elias Clough, Lynn, | " | six | " |
| " | " | John Newhall, " | " | six | " |

One pair by Isaac Standley, Beverly, aged five years.
" " George P. Wilkins, Middleton, " five "
" " B. W. Crownshield, Topsfield, " five "

The Committeee have agreed to award the premiums as follows:

To Richard S. Bray, of Newbury, first premium, $10 00
" John Washburn, Lynn, (7 years old) second premium, 8 00
" Jonathan Berry, Middleton, third premium, 6 00
" Isaac Standley, Beverly, fourth premium, 4 00

The Committee would remark, that a pair belonging to William Foster, of Andover, were worthy of a premium, but not the first. Having taken the second premium the last year, they were, by the rules of the society, cut off the present year from the same or a smaller one.

JEDEDIAH H. BARKER, CHAIRMAN.

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## ON STEERS.

The Committee Report, there were three pairs of three years old, one pair of two years old, and four pairs of yearling steers exhibited, and they have awarded the following premiums:

THREE YEARS OLD STEERS.

To Jedediah H. Barker, of Andover, first premium, $7 00
" David S. Caldwell, of Byfield, second premium, 6 00

TWO YEARS OLD STEERS.

To Moses Pettingill, of Topsfield, second premium, $4 00

YEARLING STEERS.

To Seth Kimball, of Bradford, first premium, $4 00
" David S. Caldwell, of Byfield, second premium, 3 00

James Day, of Bradford, presented a yearling steer of extraordinary size, and your committee recommend a gratuity of $2 to Mr. Day. For the Committee,

J. KITTREDGE.

## ON BULLS.

Seven bulls were presented for premium, and the committee have unanimously awarded the premiums as follows:

To J. G. Walcott, of Danvers, for his two year old native bull, first premium, - - - - - $7 00

To Joseph Kittredge, of Andover, for his two year old Devon bull, second premium, - - - - - 6 00

To David Lake, of Topsfield, for his three year old half Ayrshire bull, third premium, - - - 5 00

For the Committee, SOLOMON LOW.

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## ON FAT CATTLE.

The Committee on Fat Cattle, having attended to the duties assigned them, would respectfully Report:

There were only three entries for premium, one by Jesse Sheldon, of Beverly, one fat heifer; one by Daniel Low, of Essex, one pair of fat oxen, six years old, weighing three thousand, six hundred pounds; one by Jedediah Farnham, of Andover, two pair oxen, one pair weighing three thousand eight hundred and ninety-five pounds, the other pair three thousand six hundred and sixty-five pounds.

There were two other pairs on exhibition, by Joseph Leavitt, of Salem, very fine cattle, but as they were not entered for a premium, this passing notice is all we can express.

On examination, your committee could find no person to show or describe but the four cattle belonging to Mr. Farnham, of Andover, one pair of which we did not think came up to the requirements of the Society's rules. The other pair, on the other hand, were a fine pair of cattle, and fully entitled to consideration. We therefore award to Mr. Farnham, for his best ox, the first premium, - - - $10 00

And the second premium for his mate, - 8 00

For the Committee, WINGATE MERRILL.

## ON MARES AND COLTS.

The Committee on Mares and Colts, would respectfully report, that seven mares and twenty-six colts were entered for premium.

The exhibition was considered by the committee the best ever offered in Essex county. Many of the animals were deserving of premiums, had a larger number been at the disposal of the committee. After fully examining each one, they with much difficulty award the following premiums, viz:

To Dean Robinson, of West Newbury, for the best breeding mare, the premium, - - - $10 00

To Jos. Kittredge, of Andover, for the best four year old colt, the premium, - - - - $10 00

To Ezra Dodge, of Wenham, for the best three year old colt, the premium, - - - - 8 00

To Israel Trask, of Beverly, for the best two year old colt, the premium, - - - - - 6 00

To Moses L. Atkinson, of Methuen, for the best one year old colt, the premium, - - - - 4 00

WILLIAM OSBORN,
HORACE KIMBALL,
ELIJAH POPE,
SAML. C. PITMAN,
J. COLMAN.

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## ON SWINE.

The Committee on Swine having attended to the duties assigned to them, Report:

The whole number of Swine entered for premium was twenty-seven, viz: by A. W. Dodge, of Hamilton, six weaned pigs four months and twenty-eight days old.

John Smith, of Hamilton, a breeding sow and her litter of six weaned pigs.

Abel Burnham, of Gloucester, one boar, four months and ten days old.

Seth Kimball, of Bradford, Suffolk boar, six months old.

Wm. G. Lake, of Topsfield, a breeding sow nine months old, Suffolk breed.

Henry Poor, of Andover, five pigs three months 9 days old, one-half Suffolk breed.

Josiah Crosby, of Andover, one Suffolk boar, one do breeding sow and four pigs.

The Committee would award the premiums as follows:

To Seth Kimball, of Bradford, for his Suffolk boar, first premium, - - - - - $5 00

To Josiah Crosby, of North Andover, for his Suffolk boar, second premium, - - - - 3 00

To John Smith, of Hamilton, for the best breeding sow, native breed, first premium, - - - $5 00

To William G. Lake, of Topsfield, second premium, 3 00

To John Smith, of Hamilton, for the best litter of weaned pigs, first premium, - - - - 6 00

To Allen W. Dodge, of Hamilton, second premium, 3 00

To Abel Burnham, of Gloucester, for the best weaned pig, first premium, - - - - 4 00

To Henry Poor, of Andover, second premium, - 2 00

For the Committee, AARON DODGE.

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## ON SHEEP.

The Committee Report that two entries were made, both of which, they consider good specimens, and entitled to premiums.

The first premium, of $7 00, they recommend be awarded to Joseph Kittredge, of North Andover, for his sheep, consisting of pure South Downs, half blood and Leicester cross.

The second premium, of $5 00, they recommend be awarded to Dean Robinson, of West Newbury, for his full blood South Down sheep.

For the Committee, JOSIAH LITTLE.

## ON FANCY ARTICLES.

The Committee on Fancy Articles have the satisfaction to Report, that, under the new regulations of the Society, in regard to the entry and exhibition of articles, they had better means of examining and comparing their several merits than heretofore—while the public at large have been better accommodated in viewing the exhibition. The Committee desire to express their obligations to the ladies who kindly lent their valuable assistance in guiding them to a correct judgment on the merits of those articles more particularly in the province of the gentler sex. The number of articles is much greater than in former years, and in many there is a decided improvement in quality.

The following is a list of the articles, with the Premiums and gratuities annexed. In some cases where no gratuities appear to be awarded, the articles were of sufficient merit but did not come within the rules of the Society, which require the article to have been produced since the last annual exhibition.

For the best specimen of work by a child under 12 years of age, the first premium is awarded to Master Geo. A. Osborne, Jr., of Danvers, for an elegant ottoman, wrought at the age of 9 years, $3 00

For the second best specimen, to Hannah E. Burke, of Beverly, for a neat and well knit Tidy, 2 00

For the best specimen of Lace Work, to Sarah F. Lee, of Manchester, for a collar, and cap, and a strip of edging of remarkable fineness and workmanship, 3 00

For the second best, to Miss Sarah E. Tuck, of Beverly, for a very superior specimen of Lace Work, 2 00

For a well executed portrait of Jenny Lind, by Mrs. Dustin, a gratuity of 50

Basket of Wax Fruit, looking natural and tempting, by H. P. Black, of Danvers, 12 years of age, 50

Specimens of Pen and Ink Drawings, quite meritorious, by Jos. A. Potter, an invalid 11 years old, 1 50

An ancient Sampler, worked in 1788 by Mrs. Ann Moore.

Two vases of manufactured flowers and dried grasses, very good looking, by Geo. W. Jackson, of Danvers, 25

One vase of similar flowers by Lydia Manning, Salem, 25

One four stranded clothes line, and other specimens of very superior Cordage, by J. Burley, Salem, 1 00

Models of sliding gates, of novel construction by Seth Williams, of Salem. The Committee learn that this style of gate has been used with good satisfaction, 50

Woodland moss and basket, a fine specimen and beautifully arranged, by Lydia Pope, Salem, 50

One elegantly wrought handkerchief by Mrs. Benjamin Upton, jr., Salem, 50

A superior Ottoman by M. E. Kimball, of Salem, 50

A nest of four balls turned one within the other from a solid piece of wood, showing wonderful skill and ingenuity worthy of the most expert Chinese handicraftsman, by J. Lovett Whipple, Salem, 1 00

Bead bag, by Hannah M. Norris, Hamilton, 25

Washing Machine. It is easy of action, and seems well calculated to diminish the horrors of the dreaded washing day; Stephen Granville, Danvers.

Eagle Hay Cutter. This invention appears to be an improvement on similar machines, and a useful article to prepare food for domestic animals; by David Styles, jr., Middleton.

Painting on Ivory, by M. M. Barker, Salem, 25

One bag of Indian Meal, by John Withey, of Beverly, very finely ground, pure and sweet, The Committee can hardly explain why this came under their inspection as a Fancy article, except under the rule that every thing belongs to them which belongs nowhere else, 50

Ottoman Cover in raised Crewel work, a superb article, by Mrs. Abby Masury, Beverly, 50

Hair Work. Two self contracting half wigs, by Caroline Remond Putnam, Salem. A most beautiful and finished article. With such specimens of skill in this line of innocent deception, it seems quite un-

necessary to go abroad to find what is so well provided at home, 1 50

Pin cushion, book mark and needle book; good articles, by Mrs. Dunn, Salem, 25

Shell Work. Monument, by Edward F. Harrington, Beverly, 25

Another monument in shell work, by L. H. Dennis, of Marblehead, 25

Table and monument with shell work. Elaborate and skillful productions, showing great industry and taste, by a lady of Salem.

Vase of Shells filled with artificial flowers; very neat; by Lydia A. Colby, Salem, 25

Shell cottage, very neatly and tastefully made and ornamented, by William C. Hood, Salem, 50

Shell work box, by Gardner Barton, Salem, 25

Tidy, very fine work, by Esther B. Shove, Danvers, 50

Another Tidy, a nice article, by L. B. Harrington, of Beverly, 25

Chair Cushion of silk patch work, containing 325 pieces, by Mrs. Patterson, Beverly, 25

Fancy table, painted with border of flowers and centre ornament, by Mrs. R. A. S. H. H. Jewett, Ipswich, 50

Another fancy table, with figures of patch, laid on and varnished, by Miss Eliza Shaw, Salem, 25

Portrait in crewel work, S. A. Pulsifer, Salem, 25

Case of stuffed birds with fine plumage, very natural and lifelike, showing that the art of embalming is not wholly lost; by S. Jillson, Lynn.

Wrought slippers, by Caty J. Felt, Salem, 25

Crayon drawing, an old oak, well done; Elmira K. Roberts, Salem, 25

Silk Cameo Bag, Harriet M. Dean, Salem, 25

Toilet Cushion, Mrs. S. E. Hodges, Salem, 25

Fancy Plough, made of crystalized Alum, by J. Upham, Salem, a brilliant article and an appropriate ornament to the hall, and suited to the occasion.

Bead Bag, three Ottomans and Chair, showing skill and taste, Mrs. Geo. Kimball, Salem, 1 50

Chair Seat of fine workmanship, by S. W. Wheeler, Danvers, 75

Box covered with fragments of Granite from Mansfield's ledge, in Lynnfield, Miss Mary Mansfield, Lynnfield, 25

Gothic Dress Box, a neat article, Wm. F. Chappel, Salem, 25

Openwork Knit Shawl, of fine material and elegant figure, by M. Westwood, Danvers, 50

Carded Wool, by Amos J. Withey, of Beverly, an excellent article for the spinning-wheel, if that were not an obsolete implement, 25

Fine Crewel Work in frame, Miss E. C. Whipple, Hamilton, 50

Infant's Blanket, superbly wrought in floss, by Lydia T. Caller, Danvers, 50

Card Basket, by R. P. Pratt, Salem, 25

Various fine specimens of Lace Crewel Work by Irene Clark, of Salem, 1 25

Chest of Drawers in miniature, by Charles C. Perkins, of Salem, 9 years old, 25

This lad will make a skillful mechanic.

Two Knit Table Mats, S. F. Shapleigh, Salem, 25

One Table Cover, very neat work by Mrs. M. G. Farmer, Salem, 25

Sampler in frame, by Elizabeth A. Lovejoy, Salem, 5 years old, showing great precocity of talent, 25

Crewel Work, in frame, by Mary E. Felt, Salem, 25

Another by Miss Margaret P. Ives, Salem, very good, 25

A Fruit Tureen inlaid, composed of 113 pieces of wood, and 50 different kinds. Two Vases of 106 pieces, and 100 kinds, and two Canes of 112 pieces, and 86 kinds, were exhibited by Mr. Hiram Andrews, of Salem. They exhibit proofs of great patience, ingenuity and skill, 1 00

Chair Cushion and Chair, by Mrs. S. Sawyer, Methuen, 75

One Crayon Drawing and 3 Fancy Fans, very well done by Lydia L. A. Very, of Salem, 50

Two Wrought Crickets, very neatly done, by Alfred Osborne, Danvers, 7 years old, 50

Box of Pulverized Sage, good material and well manufactured, but the Committee are sagely of the opinion that it is not to be fairly considered a fancy article. Manufactured by Amos J. Withey, of Beverly, 50

Velvet Bag wrought with Beads, a rich article, M. J. Randall, Salem, 25

Box of Needle Cushions, well made, and very useful articles for every good house-wife. Also, a Scrap Book of Engravings, by Charlotte L. Morgan, of Beverly, 75

Bed, Bedstead and Bedding, of proper size for a Lilliputian, but too small for Tom Thumb, very neatly got up by Abby Ann Grant, 25

Pine Apple Potatoes, by J. Dennis, of Marblehead. A very curious natural production, but the Committee are puzzled to know how they came among the manufactured articles, 25

Specimen of Tomato Figs. This is another article more properly belonging to the Horticultural department. It may however be considered in one sense, a manufactured article, having gone through the process of preserving, which makes it a tempting article for the palate, by Miss N. Remond, of Salem, 50

Sampler in frame, exceedingly well done by a lad only eight years of age, Master Geo. H. S. Driver, of Salem, 25

Travelling Bag, a rich article and beautifully wrought, by S. E. Symonds, Salem, 50

Lamp Screen, very beautiful, by Mary A. Putnam, of Salem, 25

Toilet Cushion, Lucy C. Small, Danvers, 25

Ottoman, by Elizabeth Downie, Salem, 50

Pair of Wrought Shoes, Miss Morgan, 25

Two Taborets, the wood work finely carved by Mr. J. F. Mann, of Ipswich, and the top wrought by Miss Mary J. Mann, 13 years of age, 1 00

Three specimens of Nails well wrought and finished, by James Oliver, Saugus, 50

Specimens of Horse Shoes, of excellent workmanship, and superior finish, by D. Harding, Salem. The Committee consider Mr. Harding, in his line of business, a first rate shoemaker, 50

One Chair Covering, of silk patch work, by Miss A. Stowers, of Salem, 25

Jenny Lind bonnets, by W. R. Ellis, of Newburyport. These articles are very elegant, and elicited much commendation. Their stand was continually surrounded by an admiring throng of ladies with most wishful countenances. By giving the name of the Swedish songstress to these bonnets, we think Mr. Ellis entitled to a free ticket, and first choice of seats at her concerts.

Embroidery in frame, by Miss Bowditch, Salem, 25

Infant's coat, by Mary E. Williams, Salem. After diligent search, the committee were unable to find this article, although it was fairly entered. Perhaps it was too small to be seen without a microscope.

Two baskets of dried moss and wild flowers, by E. Downie, Salem, 25

Cloth work basket of handsome shape. A useful article, and elaborately ornamented, by Miss Sarah E. Tuck, Beverly, 50

Bay State Cooking Stove, the Farmers' and Cauldron Stoves, by N. & T. H. Frothingham, Salem. The Cauldron is a capital contrivance for heating water with great saving of mason work in the usual boilers. The Farmers' is the latest improvement in warming, and the Bay State is said to be essential to the married state.

Barrel Chair and fancy hour glass table. Neat and handsome furniture, although the frames are made from cheap and rude materials, by Mrs. Metcalf, Salem, 75

One Rocking Horse, by Joseph Cloutman, Salem. This is a finely formed and very docile animal, and an excellent saddle horse. He has, however, more bottom than speed, and will canter better than trot. He is

kind in any harness, addicted to no bad tricks, and is in all respects sound, wind and limb. The committee unhesitatingly recommend this breed of animals to all juvenile equestrians. They reluctantly turn him over to the appropriate committee on "Mares and Colts" and hope he will draw a liberal premium.

One bundle of curled horse hair Rope, an excellent article, manufactured by E. Lord & Co.

Four Crayon Drawings, by Miss L. D. Cutts, Salem. Very superior, showing great talent as an amateur artist; the drawing and perspective almost perfect, 1 00

Sofa Cushion, by the same, 25

Two Cologne stands, fine bead work, by Anstis D. Cutts, Salem, 25

Butter Stamp. An ingenious contrivance to shape and ornament butter for the market or table—contributed by William Chase.

Hair cloth Cushion, embroidered by S. F. Cutts, 13 years, 25

Taboret in Silk, Velvet and Worsted Patch Work, by Mrs. Joshua Upham, Salem, 63 years of age. A specimen of work which would be creditable to any lady 40 years younger.

Music Stool Covering, embroidered by Lucy A. Swasey, Salem, 25

Ornamental Basket made of fragments of kid of different colors, 192 pieces, by Miss C. A. Neal, 25

Basket of Mosses, a most beautiful specimen of sea flowers, E. H. Valentine, Salem, 50

[The above was enclosed in a neat and rich frame ingeniously constructed by Philip Chase, in the 85th year of his age.]

A fine bouquet of Artificial Flowers, rather calculated to excite the jealousy of the natural ones, Caroline A. Stiles, Middleton, 25

Crewel Work, by Harriet A. Ross, an orphan 7 years old, 50

Ottoman Cover, by Mrs. A. S. Foster, Beverly, 50

Landscape of wrought Satin, by R. Moses, in 1803. Two specimens of same kind of work well done by

Martha Ann Honeywell. What is most wonderful is, that the work was done with her toes.

An ancient piece of Needle Work by Miss Sarah Foster, in 1705, in the town of Boston. Curious as a specimen of the art of embroidery of that day, and useful to contrast with the more elegant needle work of our time.

[The above was accompanied by a Lace Cap, knit by Mrs. Sarah Burt, a lady of 73 years of age.]

Six specimens of Hair Work, by S. C. Potter, Salem, equal to any thing of the kind the committee have seen.

Watch Case beautifully wrought with Beads and Crewel, by Alice M. Mahoney, Salem, 6 years old, 25

Two watch cases, similar to the above, by Martha L. Rogers and Susan K. Rogers, Salem, severally six and seven years of age; each 25

Wrought slippers, Harriet S. Bates, Salem, 25

Another pair, Eliza J. Brown, Lynn, 25

Copies of a volume of Prose and Verse, composed and printed in the leisure hours of the author, while an apprentice in a newspaper printing office. A most commendable instance of the pursuit of knowledge under difficulties, and a good example of application to all apprentices, in whatever avocation, by Charles W. Swasey, Salem, 1 00

This is an elegantly printed and bound volume, of which a dozen copies only were issued for distribution to a few friends. From prologue to epilogue, from title-page to colophon, the author states, it is the work of his own labor, both mental and manual. It occupied about 380 hours in the printing, from June 15, 1849, to April 25, 1850.

Mr. S. has been employed in the Salem Register Office since he commenced his apprenticeship in 1837; and to show what young men can do by a systematic and judicious occupation of their time, we present a few facts stated in the volume alluded to. It must be remembered that his usual avocations in the office, (always well and faithfully performed,) occupy him, on an average, about ten hours a day,

and that he has also served as an active and efficient member of several societies and on various committees. The volume spoken of, comprising 212 pages, contains but from one sixth to one eighth of all he has written, including many contributions to newspapers and monthly and annual publications. In addition to all this he kept a brief daily journal for some eight years;—ten copies of the first year, ending March 12, 1843, with an Appendix, he printed in a small book of 142 pages, which occupied a considerable portion of leisure time from April 15, 1843, to May 7, 1844. He has also read, in the twelve years and a half, one hundred and seventy-one volumes—several of them from two to five times each—and an aggregate of more than forty-one thousand pages, or on an average about sixteen and a half pages per day. This is exclusive of miscellaneous reading, and of some entire volumes which probably escaped recollection. Such an example of persevering industry is rare indeed, and we are glad of an opportunity to add our testimony in commendation of it.

Two Crickets, very neat, by Mary W. Lamson, Salem, 25

Embroidered work bag, very fine, by Mrs. John Masury, Beverly, 25

Knit window curtain, a splendid article, Sarah A. Bowden, Salem, 50

Two Lamp Mats, fine workmanship, Lizzie B. Newhall, Lynnfield, 25

Three Gutta Percha Ear Trumpets, apparently well adapted to aid the sense of hearing, J. Ford Smith, Salem, 50

Two bottles Ketchup, an excellent article, made by Mrs. S. Wellman, Middleton, 50

A case of rich jewelry and silver ware, exhibited by Messrs Smith & Chamberlain, attracted much attention.

Box of Infants' Socks, by Mrs. Nathan Peirson, Danvers. These tiny specimens of hosiery were very beautiful, and excited much interest. They may become more interesting when the feet are found to occupy them, 50

Ocean Flowers. A very fine specimen in form of a harp, and arranged only yesterday, by Miss Mary

Watson. They exhibit much taste in their arrangement.

One Lace Cape, by Miss E. A. Hall, Salem, 50

Another by Ruth Ann Felton, Salem, 50

Two specimens of Mono-Chromatic Painting, by Lane & Sherwood, Salem. These paintings are very fine, and present the appearance of good aqua tinted engravings. The shading and perspective are very good. This is an art well worthy the attention of young people.

Daguerreotype Portraits and specimens of Penmanship, by T. S. Williams, of Lynn. These were quite creditable to the artist. The wonderful discovery of this art of sun painting may yet enlarge the boundaries of Science, to an extent once scarcely imagined. Already the stars have been Daguerreotyped and fixed on the silver plate of the artist. Why then may not portions of the moon be so represented as to exhibit a part of her disk with that perfection which belongs to this art, and then the plate be examined by a powerful microscope which shall let us into the hidden secrets of our Satellite. We make this suggestion to Mr. Williams with the hope that he will improve the hint, and some fine day—or night, introduce the Committee to that noted individual, the "Man in the Moon."

Two loaves of domestic Bread of excellent quality, made from flour and indian meal, by Mrs. M. Williams, of Salem, 75

The Committee take pleasure in recommending a gratuity for this sample of well made bread, and also recommend to the Trustees, the establishment of an annual premium of sufficient amount to induce competition in this indispensable article of domestic economy. It seems incumbent on the Society to look after the bread as well as the butter of the community, as these articles have a strong affinity for each other. It is a fact as true as it is lamentable, that in the preparation of this essential article of our daily living, we are far behind other na-

tions of the earth. We fear that it has been the unfortunate experience of many of our Society, to be called upon to partake of bread made by unskillful hands from good flour, which has been converted into a dry, tough, heavy, and indigestible mass, noxious to the taste and highly deleterious to health. We believe the Society will be sustained by the general sentiment of the community in any attempt to supply the people with pleasant and nutritious bread. This article of food has in all ages been considered the very staff of life; and all mankind—even the most zealous opponents of capital punishment—have approved of the act of Pharaoh in hanging his chief baker, under the presumption that he was guilty of making bad bread.

FITCH POOLE, CHAIRMAN.

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## ON DOMESTIC MANUFACTURES.

The Committee on Counterpanes, Carpetings, and Rugs, Report:

That the exhibition of that portion of Domestic Manufactures which was submitted to their supervision, did much credit to the economy, industry, taste, and public spirit of the matrons and misses of Essex County. It evidenced their economy in converting rags and otherwise almost worthless material into durable, useful, ornamental, and comfort-giving articles for their own sweet homes. Counterpanes, Carpetings and Rugs! How many of the most felicitous emotions and joyous hours of human life are associated with these! And how immensely valuable beyond their intrinsic worth are oftentimes such manufactures, when wrought by the hands of a mother, wife, sister or daughter! How much may they sometimes promote education and intellectual development even? Imagine for a moment a family circle sitting round that beautifully wrought hearth rug, which obtained the first premium on this occasion, very naturally talking about and enlightening each other on the biographical and historical associations suggested by the

house of J. Q. Adams there delineated! How much may the faculties by which order and the beauty of form and color are appreciated, on which so much of human happiness depends, in a family of children, be developed by the correct imitation of a boquet of flowers wrought into a mat on which they play or sleep! But we forbear to pursue this train of thought further.

The committee were highly gratified also, by the work of hands which in the last century clothed "their households with scarlet," and for which they made "coverings of tapestry and fine linen, and clothings of silk and purple"—hands which in early life were "laid to the spindle, did hold the distaff" and work the loom—and which yet with astonishing expertness and effect wield the needle and knitting pin. No less admirable were the exhibited work of misses yet in nursery, or but recently escaped therefrom, whose precocious ingenuity already rivals that of those of their sex old enough to be their mothers and grandmothers. They were also gratified to observe an improving taste and artistic skill in the choice of figures and colors—the management of light and shade, and in all that is beautiful in the design and finish of rugs and other articles submitted to their examination. Many articles which added much to the interest of the show, were entered on the morning of the exhibition too late for premiums, according to the rules of the society. Among these were several pieces of beautiful Brussels and Royal Wilton Carpeting, from the factory of Gilbert Tapley, of Tapleyville, Danvers.

In conclusion, the committee would recommend to the Trustees to continue the rule that all articles of manufactures should be entered and placed in the hall on the day previous to the exhibition, sufficiently early for the committees to examine and award the premiums, uninterrupted by visitors—that a small fee for admission be still required, and that in consequence of the revenue thus obtained, more liberal and numerous premiums and gratuities be offered and awarded—thus affording greater inducements to the producers in the county to show their best works for the benefit of the community.

The committee give their best thanks to those ladies who assisted them in the examination of the articles and in the

awarding of the premiums. The aid and comfort which they afforded us will long be remembered and duly appreciated, and we trust that the fair competitors will be better satisfied with the awards, when they know that their own sex had a voice in their distribution. And we recommend to our successors that they too, if the Trustees should not see fit to appoint ladies on these committees, associate with themselves their wives, or other ladies, in the performance of the duties assigned them.

The committee recommend the following premiums and gratuities:

COUNTERPANES.

To Abigail Greenough, Groveland, for her knit cotton Counterpane, (formed by 1252588 stitches) first prem. 4 00
To Eliza E. Cutts, (eleven years old,) Salem, for her hexagon patch Counterpane, second premium, 2 00
To Sarah Lunt, Newbury, - - - 1 50
To E. C. Green, Newburyport, - - . - 1 50

CARPETINGS.

Only two pieces of Carpeting, and those of cut strips of cloth woven by hand, without the use of loom or shuttle, containing twenty or more square yards each, were entered in season for premiums. For the manufacture of these they awarded:

To Martha B. Frothingham, first premium, - - 5 00
" Nancy W. Gray, Beverly, second premium, - 3 00
" Elizabeth Deant, aged 81, on account of the remarkable degree of industry and enterprise in the collecting of the material, coloring, and completing a carpet for her small room, a gratuity - - - 2 00

RUGS.

To Sarah P. Wheeler, Salem, first premium, - 3 00
" Elizabeth D. Poole, Rockport, second premium, 2 00
" Lucy B. Baker, Beverly, three braided mat, a gratuity 1 00
" R. L. Woodbury, Hamilton, " 1 00
" Mary A. Dodge, Wenham, " 1 00
" P. F. Atkinson, Andover, " 1 00
" Mary Ann Perkins, Essex, " 1 00

To Abba B. Annable, Hamilton, a gratuity, 1 00
" Lucy Nutter, Essex, " 75
" Martha Russell, Salem, " 50
" Mrs. Osborn, Salem, " 20
" Mary A. Leach, Beverly, " 50

By order of the Committee,

ANDREW NICHOLS, CHAIRMAN.

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## ON CLOTH AND HOSIERY.

The Committee on the manufacture of Cloth and Hosiery, Report, that the articles exhibited in this department, though not numerous, were all of excellent quality and workmanship. They recommend the following awards, viz:

To James Bailey, Andover, one piece flannel, first prem. $4 00
" B. P. Adams, Topsfield, one piece frocking, gratuity 2 00
" J. Mann, Ipswich, three boxes hose, " 1 00
" Sarah H. Tibbetts, Salem, table cover, " 1 00
" Sarah Lee, Manchester, table cloth and fringe, " 1 00
" Huldah D. Estes, Danvers, two table cloths " 1 50
" Huldah D. Estes, Danvers, two hand cloths, " 75
" J. Banvard Teague, Salem, two pair stockings, " 50
" Mrs. Geo. Kimball, Salem, one " " " 50
" Mrs. Jerusha Rhodes, Lynn, two pair hose, " 62
" Mrs. J. Bailey, Andover, one pair stockings, " 25
" Julia Greenlow, Marblehead, 1 pair infants socks, gratu. 50
" Margarett Brown, Hamilton, 3 pair men's socks, " 50
" Mrs. Esther Smith, Lynnfield, one shirt, " 50

One case of eight pieces of woolen cloth, from the Rockdale manufactory, Danvers, entered by E. A. Russell, was a good specimen of that description of goods—but did not come within the rules of the Society authorizing the award of a premium or gratuity.

For the Committee, J. HOBBS.

## ON LEATHER,

### AND ARTICLES MANUFACTURED THEREFROM.

The Committee on Leather, and articles manufactured therefrom, Report: that they were pleased to find more Boots and Shoes exhibited, than last year, although they cannot but express their regret that in this department more interest is not manifested. This department includes articles of the largest manufacturing business of the county, and we cannot but express the hope, that a larger display of specimens will be exhibited another year.

The committee were not authorized to give any premiums for manufactured leather, and would take the liberty to recommend that premiums be offered in future years for the best specimens of both Sole and Upper Leather, also for specimens of curried Goat and Kid skins.

As these articles are so closely allied to our UNDERSTANDINGS, it seems important that sufficient inducements should be offered to secure to it that notice which its importance requires. The Committee have awarded the following premiums and gratuities:

| | | |
|---|---|---|
| To Jacob Dickinson, Georgetown, for the best thick boots, | 3 | 00 |
| " D. B. Stickney, Groveland, for the 2d best " " | 2 | 00 |
| " Amos Gould, Wenham, for specimens of California boots, gratuity, | 2 | 00 |
| " Jacob Dickinson, Georgetown, for calf skin boots, second premium, | 2 | 00 |
| " Jacob Dickinson, Georgetown, best thick brogans, second premium, | 2 | 00 |
| " Putnam & Black, Danvers, California brogans, gratu. | 1 | 00 |
| " Francis Dane, " lace brogans, " | 1 | 00 |
| " Wm. H. Poland, Wenham, army brogans, " | 1 | 00 |
| " Alfred Brown, Boxford, women's Dutch boots, " | 1 | 00 |
| " William H. Graves, Ipswich, ladies' walking shoes, first premium, | 2 | 00 |
| " Stephen Driver, Salem, ladies' kid slippers, 1st prem. | 1 | 00 |
| " " " " specimens of children's bootees, gratuity, | 1 | 00 |

To Stephen Driver, Salem, excelsior patent leather slips, gratuity, 1 00
" Wm. H. Graves, Ipswich, specimens morocco polka boots, gratuity, 1 00
" Wm. H. Balch, Groveland, men's cloth slippers, gratu. 1 00
" Christopher Johnson, jr., Lynn, specimens of ladies' gaiter and polka boots, gratuity, 1 00
" Richard Tenny, Georgetown, leather shoe strings, 1 50
" John A. Learoyd, Danvers, curried leather, gratuity, 1 00
" David Baily, Danvers, peg cutter for cutting pegs from the heels of boots, gratuity, 50

Your Committee would take the liberty to suggest the propriety of publishing in the Transactions of the Society, the statistics relating to the manufacture of Leather and articles therefrom, in the county of Essex.

For the Committee. MOSES BLACK, Jr.

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## ON THE DAIRY.

The Committee, in proceeding to the discharge of the duty assigned them, found fourteen lots of Butter upon the table for their examination, viz. eight of June, and six of September butter. One lot of June butter, (No. 7,) the committee found the statement had no name attached to it. The committee unanimously recommend that the following premiums be awarded, viz:

FOR JUNE BUTTER.

To Jonathan Berry, Middleton, first premium, $10 00
" Perley Goodale, Danvers, second premium, 8 00
" John Preston, Danvers, third premium, 6 00

FOR SEPTEMBER BUTTER.

To Elijah Pope, Danvers, first premium, $10 00
" Nathaniel Felton, Danvers, second premium, 8 00
" Warren Averill, Ipswich, third premium, 6 00

All the specimens of butter presented were good, but th

quantity, in proportion to the number of cows, does not come up to the amount that we believe would be attained, by the same labor and expense, if more care should be exercised in the selection of the best cows. The improvement in dairy stock does not keep pace with other improvements that are going on among us. We KNOW that the butter made in this county is equal in quality to any in the country, and we BELIEVE it can be made equal in quantity by a more judicious selection of dairy stock.

For the Committee. JOHN STONE, Jr.

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JONATHAN BERRY'S STATEMENT.

I present for your inspection one pot of June butter, containing twenty-eight pounds, being a sample of two hundred and fifty-four pounds, the product of six cows between the 20th May and 1st July. Also, twenty-eight pounds of September butter, a specimen of seven hundred and twelve pounds made from the 20th May to the 20th September, from seven cows.

The feed of the cows has been a common pasture; since the 10th of August they have had green corn fodder, and from the first of September each has had one quart of Indian meal daily.

PROCESS OF MAKING.—The milk is strained into tin pans, and set in a cool room or a cellar prepared for the purpose. After remaining there from thirty-eight to forty-eight hours, the cream is taken off and kept in a vault, till it is churned. Churn once a week. The buttermilk is worked out by hand, and the butter salted with about one ounce of salt per pound.

Middleton, Sept. 26, 1850.

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PERLEY GOODALE'S STATEMENT.

I offer for your examination one pot of June butter, contain-

ing thirty-one and a half pounds, a specimen of two hundred and thirty pounds, made between the 1st and 30th of June, from the milk of eight cows, two heifers, and one farrow cow, all of native breed. Their feed has been common pasture.

Process of Making.—The milk is strained into tin pans, and placed in the cellar, where it stands from twenty-four to thirty-six hours; it is then skimmed, and the cream put in tin pails, and kept in the same cellar. Churn twice a week. We are very particular to work out every particle of the buttermilk, and salt with nearly one ounce of rock salt to the pound.

North Danvers, Sept. 26, 1850.

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JOHN PRESTON'S STATEMENT.

I present for your inspection a jar of June butter, containing twenty-seven pounds, a sample of one hundred and fifty pounds made between the 1st of June and 9th of July, from the milk of three cows and one heifer, of native breed. Also, two boxes of September butter, containing nineteen pounds, being a sample of three hundred and fifty-one pounds made between May 25th and September 24th, from the same cows, two of them coming in June 5th. We have used in the family and sold about four quarts of milk per day. The feed of the cows has been common pasture until August 5th, when we commenced feeding with green corn fodder.

Process of Making.—The milk is strained into tin pans, and placed on the bottom of a cool and airy cellar. It is skimmed in about thirty-six hours. The cream is put in stone jars, and is churned twice a week. The buttermilk is worked out thoroughly without the addition of cold water, and salted one ounce to the pound.

Danvers, Sept. 25, 1850.

ELIJAH POPE'S STATEMENT.

I offer for your inspection a jar of June butter, containing thirty-one pounds, being a specimen of one hundred and sixty pounds made from the milk of three cows, from June 1st to July 9th. Also, two boxes of September butter, containing eighteen pounds, being a sample of four hundred and eleven pounds made from the 1st of June to the 24th of September, from the milk of the same cows, with the addition of one cow since the 10th of July, and one three year old heifer since the 12th of August. Their feed has been common pasture.

PROCESS OF MAKING.—The milk is strained into tin pans, and stands in a cool cellar from thirty-six to forty-eight hours, when the cream is taken off and put in tin pails, and stirred every day. We churn twice a week. During the warmest weather the cream is placed in the well from twelve to twenty-four hours before churning. After it is churned the buttermilk is thoroughly worked out, and the butter is salted with three-fourths of an ounce of ground rock salt to the pound, except the June butter, which is with one ounce to the pound. After standing six hours it is again worked, and weighed each pound separately.

Danvers, Sept. 25, 1850.

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NATHANIEL FELTON'S STATEMENT.

I present for your inspection one firkin of June butter, containing twenty-six pounds, made on the 20th of the month. Also, three boxes containing twenty-six pounds made on the 23d of September, as specimens of eight hundred and twenty pounds made between the 23d of May and 23d of September, from the milk of seven cows and two heifers; one of the cows has been in milk eighteen months. We have used milk in a family of nine, and sold two gallons per week. The cows have had common pasture till the 20th of August, since then they have had corn fodder once a day.

PROCESS OF MAKING.—The milk is strained into tin pans, and stands from thirty-six to forty eight hours, when the cream is taken off and put into tin pails, and stirred daily. We churn once a week. During the warmest weather the cream is hung in the well about twelve hours before churning. After the butter comes the buttermilk is thoroughly worked out with the hands. It is then salted to the taste, (about an ounce of salt to the ponnd.) After standing about an hour it is worked again, and weighed, each pound separately; it is then put in the shape in which you see the September butter to day, and sent to market. There was put into the June butter about one third of an ounce of loaf sugar to the pound. It has been kept in the firkin, covered with fine salt. The firkin was placed in a cask in the cellar, and brine poured in around it till it rose as high as the butter in the firkin.

Danvers, Sept. 25, 1850.

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WARREN AVERILL'S STATEMENT.

I present for inspection one box of June butter, containing twenty-five pounds, being a specimen of seventy-eight pounds made between the 1st of June and the 9th of July, from two cows. Also, one box of September butter, containing thirty pounds, being a specimen of two hundred and nine pounds made between the 20th of May and the 20th of September, from the same cows. One of the cows calved the 1st of May, the other the 27th August; the May calf I took off the 25th of May, the August calf I took off the 12th of September. We use all the milk for butter, except that for the family, which on an average is one quart per day throughout the season. We make butter the year round, and sell no milk until the cream is taken from it. In cold weather we find a ready market for all the skim milk and buttermilk. In this way we think it more profitable to make butter than to sell the milk direct from the cow. After my cows come to the barn in the fall, I give

them two quarts of meal or fine feed each per day through the winter until they go to pasture, and the best of English hay. I find in keeping cows in this way they come out in as good flesh to go to pasture in the spring, as they are when they go to the barn in the fall. My pasture is good, so by keeping well in the winter what they eat through the pasturing season goes to milk and butter. I give them no meal in pasturing time; they have then nothing but what the pasture affords for them, except a few green stalks at night.

Process of Making.—The milk is strained into tin pans, where it stands from thirty-six to forty-eight hours; it is then skimmed, and the cream put into tin pails standing on a brick floor. We churn once in five days, sometimes not until the week comes round. After the butter comes the butter-milk is drawn off, and the churn filled nearly full of cold water, and then the butter is stirred with the crank until the butter-milk is apparently all out, it is then taken out of the churn and beat by the hand until all the butter-milk is out, it is then salted with from three-fourths to an ounce of ground rock salt to the pound, and again worked over, and made into pound and half pound balls, fit for market.

We commenced the 1st day of January to weigh all the butter we make for the year, and the quantity of milk at the different seasons to a pound of butter. From the 1st of January to the 20th of May, we made one hundred and ninety-eight pounds of butter, the average quantity of milk to a pound being eight quarts, or a trifle over. The last week in June it took a trifle short of eight quarts to a pound. Last week I tried my cow that calved the 27th of August, and she gave one hundred and eleven quarts of milk, which made twelve pounds of butter, or to come to the exact quantity, one ounce short. This is a native cow;—I raised her from the cow for which I took the first premium at Lynn in 1846; she is five years old, and has had three calves. My other cow is a half sister, of the same age. I milk myself all the time, and have regular hours at the different seasons of the year. In this way I find I can keep the milk up, when others that are milked when most convenient, are dried up. I also make a practice

in cold weather to card and brush my cows down every morning, and see that they lie warm and dry at night.

Ipswich, Sept. 25, 1850.

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CHARLES P. PRESTON'S STATEMENT.

I present for your examination one pot of June butter, containing thirty pounds, being a sample of three hundred and seven pounds made from the milk of four cows and five heifers between June 1st and July 9th. We made also, from the same cows, eight hundred and five pounds from May 24th to September 24th. The feed of the cows has been an ordinary pasture until August 10th, when we commenced as usual feeding with green corn fodder in addition.

The milk is strained into tin pans, and set on the bottom of a cool cellar, where it remains from twenty-four to thirty-six hours, according to the weather. It is then skimmed, the cream put in stone jars and placed in a vault, where it is rendered as cool as possible previous to churning, which is done in a common churn, made nearly in the form of a barrel, with floats within attached to a crank, giving the necessary motion to the cream. This we consider superior to the Thermometer, or any other "patent" churn after a fair trial, having obtained more butter, and of better quality. It must be known to farmers who have tested the temperature of cream previous to churning, that with the cream at sixty or sixty-two degrees, (which is the rule applied in using the Thermometer churn,) butter, during the summer months, cannot be produced of such a degree of hardness as is desirable, neither of as good quality in other respects as when the cream is churned at a lower temperature. This has been ascertained after a fair trial.

One of the most essential points in making good butter is known to be the working out of every particle of butter-milk, which we do with the hands, without the application of cold water.

The butter is salted with an ounce of rock salt to the pound, and for long keeping should have the air excluded as much as possible, no brine being necessary.

North Danvers, Sept. 25, 1850.

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DAVID BAKER'S STATEMENT.

I enter for premium a box and a jar of September butter, containing fifteen pounds made last week, as a sample of three hundred and three pounds of butter made the present season, (since May last,) from three cows, partly of the Durham breed. Their feed has been only common pasture, till within a month, when they have had green corn fodder every morning.

In the hottest weather we churn twice a week, at other times once. The milk stands thirty-six hours before skimming. Salt one ounce to a pound of butter—use the bag ground salt.

Andover, Sept. 25, 1850.

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## ON BEES AND HONEY.

The Committee on Bees and Honey submit the following Report:

Two specimens only of honey were entered for premiums, and laid before the committee. This is the first instance in our recollection, of encouragement being given by the Society, by the offer of premiums for the best management of bees, and the best samples of honey made within the season. Five dollars were appropriated by the Trustees for this purpose.

The first premium, (of three dollars,) is recommended to be given to Abraham Lord, of Ipswich, for the best specimen of honey.

The second premium, (of two dollars,) to John F. Kimball, of Boxford.

Each being accompanied by a statement of the mode of management of the bees, the comparative value of each will be thereby shown. The quality of the honey the committee conceive, is not affected by the particular management of the bees, but by the kind of pasture in which they feed, and especially by the part of the season in which it is made,—the earliest made honey is supposed to be always the best flavoured. It may therefore be suggested that if any mode of management could or would be adopted, to expedite the early swarming of the young colonies, or otherwise the early commencement of their work, it would be important. It was well suggested however, by Dr. Kelley, (who was originally appointed chairman of this committee,—it is regretted that his late arrival at the exhibition required the Society to make a different arrangement of the committee,) that too much management of bees was not good, that they are a kind of insect peculiarly and tenaciously attached to their natural instinctive movements..

Your committee would have desired opportunity to have commented more at large on this subject, as it should be well understood by the poor, who stand in need of the industriously earned products of the bee as well as their own. The anecdote of the Curate who applied to the Bishop for help, as his salary was insufficient, and inquired what he should do, was answered, "O, keep bees," may not be here out of place. And for the rich it is a branch of natural history both amusing and interesting, while it supplies for the table food delicate and delicious.

If the peculiar movements of these interesting insects were to be better understood, it might eradicate from the minds of the rising generation many superstitious notions in regard to their habits. Many of our older inhabitants at this day, and in this enlightened age, practise dressing the bee house in mourning, covering it with black cloth, when one of the family, particularly the head of it, dies; they really believe if this is not done at the time of such events, the bees will all die, or forsake their home.

The Committee unanimously concur in the opinion, that the keeping of bees ought to be further encouraged, under the

belief that there is in all our country towns, and in our cities and villages, abundant pasturage still unoccupied; that they injure not the flowers and plants from which they collect their stores, and in this respect are totally harmless; and as they involve but little expense, may become a source of considerable income, particularly to a class of people needy and deserving.

Submitted in behalf of the Committee.

TEMPLE CUTLER.

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ABRAHAM LORD'S STATEMENT.

I have two kinds of hives now in use, one with two boxes on the side, one above the other, which will hold fourteen pounds of honey. These hives are very good, but not so good as some I have with two boxes in the top which will hold eleven pounds of honey each. One of these boxes has glass sides, and is not full. It was taken from a hive that had a swarm placed in it the sixth day of June last, which has filled the hive and given me thirteen pounds of honey this season. In the boxes I have had four swarms of bees this season, which with their honey are worth seven dollars each, exclusive of their hives,—the hives are worth three dollars each, making the hives and bees worth ten dollars each. I have also taken sixty-four pounds of honey in boxes, worth twenty cents a pound, making twelve dollars and eighty cents. Thus the income from my five stocks of bees this season, is forty dollars and eighty cents.

My hives are made with a pane of glass in the back, to ascertain the quantity of honey in store, and the strength of the stocks of my bees, as it is sometimes the case that after a stock has thrown off its first swarm, some accident happens to the young queen, by which the stock is left without its leader. As the old queen always leads off the first swarm, the loss of the queen may be ascertained in two weeks from the time the first swarm left the hive. If they decrease, they have lost their queen; in this case, to save my stock I unite to them a second

or third swarm, if I have them. To do this I turn the hive I wish to unite to them upon its top, then setting the stock hive upon the one turned bottom up, I make them secure that no bees escape. They will soon ascend, and the stock will readily receive them with their queen.

Young swarms that are not strong enough to stand the winter I unite with the parent hives. In doing this I have a hive the same size as that I intend to take, fixed bottom upwards; when this is ready, I light a piece of puff ball as big as a hen's egg, and as soon as it burns well I place it in a copper box full of small holes with a pointed top, that the bees may not rest on it in dropping. I then place the box in the hive that stands upon its top, and the hive I wish to take upon the one thus turned upwards; then tie a cloth round the two hives, that no smoke escape, and the bees will soon drop. When they are all down and quiet, lift the hive gently off, and turn the bees that have fallen, upon a table; then look for the queen bee, which may be easily known by her length being much greater than the working bee, with very short wings. If I find her I keep her safe; if not, I cut out the combs one by one, as she does not always drop, but holds on the combs. After I have found her I sweep the bees into a clean empty hive, and lay a piece of paper or sheet of tin upon the hive, punched full of small holes a sixteenth of an inch over; then set the hive I wish them to unite with, upon the paper or tin, and keep them separate twenty-four hours, then draw the paper or tin out, and they will soon ascend and unite with the stock. In uniting my weak swarms, as above described, I secure the strength of my stocks, which having swarmed often in summer are weak in bees, though heavy in honey.

The health of my bees I consider very important. No one can expect to have strong and healthy bees, unless they are properly ventilated. Ventilation is important in the hot season of the year, but not so important as in winter, as then a good deal of steam rises from the breath of the bees, which, if it has no way of escape, will settle on the top of the hive inside and become water, and run down upon the combs and on the sides of the hives, and freeze. Thus the bees are kept damp, and

are likely to die with the rot, or become so weak in the spring as not to be worth much. To prevent this harm to my bees, I have a hole cut in the front of my hives two inches from the top, two inches long and three eighths of an inch deep. This serves as a ventilator and second door. I also keep the holes leading from the hives into the boxes open, which lets off much of the damp air.

I never kill young swarms because they have not honey enough to stand the winter, but rather unite them to some stock that has enough and to spare, as they will more than pay for doing it the next season. Twenty pounds is enough to winter a good swarm.

I would not recommend taking up old stocks, as the honey is poor, but would recommend cutting out some of the bottom combs when they become furred up with age. This may be done by the aid of a bee dress or the puff ball. Puff balls may be found by the way side, or in pastures; they should be picked when half ripe and put in a cloth and pressed to half their size, then dried in the sun. When ripe they give a dirty powder like smoke; the smoke of the puff ball does the bees no harm, as they recover in twenty minutes. Care should be taken that the sun does not shine on the hive either in summer or winter. I have said nothing about the bee moth, having tried several experiments, and none to my satisfaction. I am led to believe that strong and healthy stocks of bees will take the best care of these intruders.

Ipswich, Sept. 24, 1850.

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JOHN F. KIMBALL'S STATEMENT,

In June 1847 I found a swarm of bees in the woods, which was hived in a small old fashioned box hive, and carried home, a distance of about two miles. They went quietly to work in their new residence, and during the season nearly filled the hive. The next season, (1848,) a swarm came out early in

June and settled on a board placed on stools about one rod in front of the hive; these were immediately hived again, and went quietly to work. In 1849 three swarms came out, (two from the old hive,) all of which settled on the board placed as above, and were hived without difficulty. This year I have had but four swarms come out, all of which came from the two oldest hives. I have now six well filled hives in prime order, besides which I have had three second swarms, (one hive swarming twice the same season,) that were of comparatively little value. In swarming time I find if a board is placed on chairs or stools, as above stated, one or two rods in front of the hives, the swarms that come out will usually, (though not always,) settle upon it, and may then be easily hived. My hives are of uniform size, about seventeen inches high, and thirteen inches each way at the top, growing a little larger at the bottom. Holes about two inches square are made in the top, and boxes similar to the one before you placed over them. These boxes when filled are removed by running slides under them, and others placed in their stead, thus avoiding the inhuman practice of "murdering the bees with fire and brimstone."

My hives stand upon benches, with no covering except boards placed above them to shelter them from the sun. Thus the wind has free access to them, and no protection is given the bee moth or miller. I have this season united two swarms in one hive,—they were both second swarms, and of course small. The first went into the hive without the box, the hole in the top being covered; the other came out two days later, and went into the box, which in the evening was set in its place upon the hive,—no disturbance was seen among the bees. Of this plan, however, I speak with diffidence, as I have made but one trial. My bees are daily visited in warm weather, and cobwebs, &c., are carefully brushed away. The honey presented for your inspection was made between June 25th and July 15th, of which there are about ten pounds.

Boxford, Sept. 25, 1850.

## ON POULTRY.

The Committee were pleased to see so large a collection of choice fowls on the ground, notwithstanding the unfavorable state of the weather, and have every reason to believe that there would have been a much larger number, if the day had been fine and suitable to show poultry to advantage. The evident improvement in this branch of rural economy was highly gratifying to the contributors and spectators generally, as well as to the committee, who feel under many obligations to the various contributors for the admirable manner in which their birds were arranged, and to the spectators for the interest manifested by them in what we consider one of the most profitable of our agricultural interests. We would impress upon the minds of our agricultural friends, and others, the importance of bestowing more attention upon this kind of stock than has hitherto been done. It is not, as many suppose, a small item, and not worthy of more than a passing notice,—it is a fruitful source of wealth and comfort to every one. Our fowls furnish us with the choicest luxuries of the most wholesome nature, and where can a person be found, that would not take pleasure in tending a few choice fowls, and feel themselves amply repaid by the large number of rich eggs that such birds would be sure to return them for their kind attentions? Where could we find a substitute for their meat at our tables, or for their delicate and wholesome nutriment to the invalid? And the puddings, and good old fashioned pumpkin pies, that cannot be produced without their share in the matter? It is not our purpose to recommend any one particular variety to the exclusion of all others, but would earnestly request each one to prove by personal experience the merits of many, if not all of the different varieties of our standard fowls, and of such of the fancy ones as he may have time or inclination to do, so as to be able to impart information of benefit to others who are, or who may wish to be interested in the subject. If any should feel inclined to doubt the importance of poultry, as one of our products, we would respectfully point his attention to figures, not fictitious ones, but those gathered from the most

reliable sources. For instance, from the Montreal Pilot, we learn that there were shipped from Montreal to the United States from May 1st of the present year to June 16th, two thousand and seven hundred barrels of eggs. Dr. Bennett tells us, in his work upon poultry, that the value of poultry in the United States at the present time, will reach the fine little sum of twenty millions of dollars. We find that in the year 1848 the sales of poultry in the city of Boston amounted to over one million of dollars, and the sale of eggs to as much more. In the face of such facts, who will say it is a matter of little consequence whether we keep fowls or not, or whether they are good, bad, or indifferent? For a description of the different varieties, manner of rearing, feeding, fattening, and a description of their diseases with instructions for their treatment, we would respectfully refer our friends to the large number of valuable treatises now published. In conclusion, the committee do not hesitate to assert, that with proper attention fowls can be reckoned as profitable stock for every farmer, and with pleasing satisfaction they confess that the show of poultry in the present instance far exceeded in number and quality, their most sanguine expectations. Let each contributor also, feel the satisfaction of having had a part in this exhibition, and resolve that, fine as the display for 1850 was, he will try and eclipse it in 1851.

The whole number of contributors was forty-nine. Whole number of fowls five hundred and forty-eight of which forty-three were water fowls, four turkeys, and also two fine lots of pigeons. The committee would award as follows:

C. F. Putnam, of Salem, for a fine display of Shanghae, Black Spanish, Singapore, and six other varieties, $2 50

G. W. George, of Haverhill, fine Shanghae and Imperial Chitagong fowls, 2 50

D. Buxton, jr., South Danvers, fine Shanghae, Black Spanish, Mexican, and one other variety, 2 50

J. H. Brookhouse, Salem, fine Shanghae, Java, Golden Polish and one other variety, 2 50

S. & O. Southwick, Danvers, fine Shanghae, Java, Black Spanish, Dorking, and six other varieties, 2 50

Eben Sutton, Salem, for an exceeding fine display of water fowls, as follows:—Bremen, Wild, China, and Mongrel Geese, S. American, Aylesberg, Musk, and White Ducks, 2 50

P. L. Osborne, Danvers, fine Shanghae, Black Spanish, Silver Pheasant, Dominique, and two other varieties, 2 00

W. Brown, N. Andover, fine Bolton Greys, 1 50

A. H. Hall, Rockport, fine display, eight varieties, 1 50

And would recommend to the following persons a gratuity of $1 50.

W. N. Brookhouse, Middleton, fine lot of Fowls, 1 50

Charles Creasy, H. Grove, fine lot of Fowls, 1 50

G. W. Williams, Salem, fine lot of Fowls, 1 00

R. P. Waters, Beverly, fine lot of Fowls, 1 00

Leverett Knight, N. Danvers, fine lot of Hybrids, 1 00

For the Committee, E. B. LITTLE.

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## ON PLOUGHING WITH DOUBLE TEAMS.

The Committee on Ploughing with Double Teams Report: That there were fourteen entries, and thirteen teams drew lots and ploughed. Ten of the lands were run out previously, and three were run out the morning of the show, after the teams were on the ground, and by some mistake were made about one third less than the quantity required, which was not discovered by the committee until after the lots were drawn for, and the teams had started.

The committee concluded that the competitors who drew the small lands ought not to be prejudiced in consequence, and therefore awarded the premiums without reference to the quantity of land ploughed, although less than the rods specified and required.

Lot No. 1 was drawn by John Washburn, of Lynn.

" No. 2 " " Richard S. Bray, of Newbury.

" No. 3 " " Paul P. Pilsbury, of Andover.

Lot No. 4 was drawn by John Newhall, of Lynn.
" No. 5 " " B. W. Crowninshield, of Topsfield.
" No. 6 " " George P. Wilkins, of Middleton.
" No. 7 " " Moses Pettengill, of Topsfield.
" No. 8 " " Jonathan Berry, of Middleton.
" No. 9 " " John S. Hubbard, of Newbury.
" No. 10 " " Horace Ware, Jr., of Salem.
" No. 11 " " Elias Clough, of Lynn.
" No. 12 " " David S. Caldwell, of Byfield.
" No. 13 " " Franklin Alley, of Marblehead.

The committee, after a full consultation, and as thorough an examination of the work as they could give, considering the storm, with some slight difference of opinion agreed to award the premiums as follows:

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|---|---|
| To Horace Ware, Jr., first premium, - - | $10 00 |
| " Jonathan Berry, second premium, - - - | 8 00 |
| " Franklin Alley, third premium, - - - | 6 00 |
| " Richard S. Bray, fourth premium, - - - | 5 00 |
| " John S. Hubbard, fifth premium, - - - | 4 00 |

In the opinion of the committee the work done by Horace Ware, Jr., and Jonathan Berry, was nearly equal. The preponderance was in favor of Mr. Ware's in consequence of the fine finishing up of the land, which the committee have rarely seen equalled.

On the land ploughed by Franklin Alley, the furrows were kept straight, and of a proper and equal width, and the furrows laid uncommonly smooth; however the ploughing was not as deep as that done by some other competitors, and to this in some measure may be attributed the very perfect manner the furrows were turned. We consider it a fact, that a furrow six or seven inches deep can be handsomer laid than a deeper one, with the same skill in exercise. If his land had been ploughed equally deep, and had presented the same appearance as it then did, it certainly would have been as good as the best.

The work by Richard S. Bray and John S. Hubbard was done in good time, the ends of the furrows of a like width of the balance, and all well turned. The several competitors varied in the time occupied, from twenty-two to forty minutes.

The shortest time taken was by Franklin Alley, and the longest by John Washburn. The land drawn by Mr. Alley was one of the small ones, and at the speed he drove he would have ploughed one of the lands of proper size in about thirty minutes. The shortest time taken by any team on the full sized lands was twenty-eight minutes, by B. W. Crowninshield. Average time on the full lands, thirty-four and seven tenths minutes. The committee consider it due to the competitors to say, that the work generally was done remarkably well. David S. Caldwell and John Newhall would have received premiums, if there had been more to award.

The slight difference of opinion in the committee as to the merits of the work, if they were good judges, is evidence that the ploughing was well done. It was the intention of the committee to have noted the kinds of ploughs used, but the severity of the storm drove the teams from the field before that was ascertained.

In behalf of the Committee. MOSES NEWELL.

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## ON PLOUGHING WITH SINGLE TEAMS.

The Committee on Ploughing with Single Teams ask leave to Report, that there were nine teams entered for premiums. Seven only appeared on the ploughing field. The work was well done by all. Upon a careful examination of the work the committee have awarded:

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|---|---|
| To Jackson H. Pickering, Danvers, first premium, | $8 00 |
| " Elijah Pope, Danvers, second premium, | 6 00 |
| " Daniel Putnam, Danvers, third premium, | 4 00 |
| " William Foster, Andover, fourth premium, | 2 00 |

All the ploughs used were Eagle No. 2, manufactured by Ruggles, Nourse & Mason.

For the Committee. JACOB BROWN.

## ON IMPROVED AGRICULTURAL IMPLEMENTS.

The Committee on Improved Agricultural Implements have attended to that duty, and Report:

That very few articles were presented either for premium or exhibition. There were in the room two ploughs from the Milford, (N. H.,) Manufactory, placed there, as the Committee suppose, by William Chase, of Salem, as his card was attached to them, but there was no person present to describe the improvement, or to explain their superiority. The committee would however say that they were very handsome and well made, and have no doubt they were very good ploughs. There were also some stove castings, and a cast iron boiler, with the same card attached, very fine specimens of castings, but no person present to give any explanation whatever.

W. J. Poor, of Andover, presented what is called a Self-adjusting Ox-Yoke, a very handsome specimen of workmanship, but as Mr. Poor was not the inventor, but only the maker, the committee cannot, according to the rules of the Society, recommend any premium or gratuity.

Stephen Granville, of Danvers, presented a new washing machine, invented by himself, which the committee believe, from what they saw of its operation, to be a very good article, if not the best now in use, and they would recommend that there be paid to Mr. Granville a gratuity of three dollars.

David Stiles, of Middleton, presented a machine for cutting hay, &c., called the "Eagle Hay Cutter," for which he has recently obtained a patent. The committee were very much gratified with its operation in cutting hay, corn stalks, &c., and believe it equal to, if not the very best article of the kind, that has ever come under their observation, and they cannot express their own views of the machine in any better form than is expressed in an article headed, "STILES' PATENT EAGLE HAY CUTTER," and published in the "Farmer and Mechanic," a paper published in the city of New York, and from which article they make the following extract: "In this machine the inventor entertains the most entire confidence, and considers its advantages over all other kinds now in use, as entitling it to

the consideration of the agricultural community generally, from the fact that it will cut any and all kinds of fodder, with equal facility, combining a self-feeding apparatus, which obviates the danger and inconvenience of hand feeding, and a very simple arrangement by which the cutter may be changed, with the greatest facility for the purpose of cutting the fodder any desired length. By its construction also, the machine when in operation, separates much of the grit and other deleterious substances from the fodder, thereby obviating injury to the knives, which may be readily removed for grinding or other purposes when desired, and which are never liable to be broken or injured by sticks, &c., which are frequently found in hay drawn by the horse rake. This machine is constructed in the most substantial and perfect manner in all its parts, and consequently will last a long time with little or no expense for repairs. Indeed, the simplicity, efficiency, and ease of its operation, cannot, we think, be surpassed by any that we have seen."

The committee therefore would recommend that there be paid to Mr. Stiles, for his "Eagle Hay Cutter," a premium of seven dollars.

Charles Gill, of Exeter, N. H., had intended to have presented for exhibition the "Independent Horse Rake," but by some mistake it did not arrive until after the committee had separated, and of course they had no opportunity to examine it or see its operation, but they have no doubt from the recommendations which have been given by those farmers who have had it in use upon their farms, that it is as good as any horse rake now in use, if not better.

DANIEL ADAMS, CHAIRMAN.

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## ON RECLAIMED MEADOWS.

The Committee on Reclaimed Wet-meadows and Swamp land, submit the following Report:

Two claims only were entered with the committee, one by

John Porter, of Wenham, and one by Calvin Locke, of Ipswich. Three of the Committee,—Messrs Osborn, Dole, and Merriam,—visited these meadows the second week in July, before the grass was cut, although Dr. Porter had begun to cut his. The meadow of Dr. Porter was situated within twenty rods of his house, which made it very desirable to have something better than litter growing upon the meadow. It was in the form of a basin, surrounded by a bold, sandy, and fine gravelly bank, very convenient for application to the meadow, which could be and is effectually drained. The outlay which has been made upon this piece of meadow, appears to us a judicious one, and one which will amply remunerate the owner. The very accurate and explicit statement given by Dr. Porter will supersede any further remarks from us. He suggests the importance of future attention, which is necessary in all such boggy lands. The natural meadow grasses are inclined to spring up, without future dressings. The committee would recommend that the first premium, (of twenty dollars,) be awarded to him.

The piece of land offered by Mr. Locke is a low, flat swale, consisting of a black sandy soil, with a natural growth, principally of the alder, a soil suited to that bush. The alder is perhaps as easily subdued and extirpated as any bush we have to contend with. After draining and cutting off the bushes, this land could be worked upon with the oxen and plough. This being the third crop of hay since the land was reclaimed, the quality was probably not quite so good as in the other two years; some natural grasses were mixed with the English, although there was a very good crop ready for the scythe. Mr. Locke not being the owner of the soil, had leased it for twenty years, and was so well satisfied with his success that he had already another portion of the swamp adjoining, in progress of reclamation, being planted with potatoes and vines, which likewise promised well. It will be seen by Mr. Locke's statement that the expense of subduing his land has been somewhat less per acre than that of Dr. Porter's. We will take the liberty to suggest to Mr. Locke that we think such soils as he is at work upon will bear high manuring, and will make good returns for

the outlay. The committee are of opinion that Mr. Locke is entitled to the second premium, (of fifteen dollars.)

R. A. MERRIAM.
WM. OSBORN.
L. H. DOLE.

November 15, 1850.

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JOHN PORTER'S STATEMENT.

My meadow, which you viewed in July last, was surveyed Sept. 30, 1850, and contains two acres and ninety-five poles, including the ditches, which occupy a fraction over thirteen poles of the surface. For many years previous to my purchase in 1832, it was annnally covered with water two or three feet deep from November to April, by means of a dam made at the lower end of the meadow to connect with a natural ridge of the adjacent upland. While the flowing was continued the yearly product of hay was large, averaging more than a ton to the acre, but the quality was inferior. This meadow was very wet, even in August, and all the hay had to be poled out, for it would not bear an ox without miring, upon any part of its surface. It was also very rough, abounding in hassocks, and small bushes about the size of a pipe stem, began to make their appearance. The depth of the soil, or vegetable matter, was from three to twelve feet to hard bottom. There were two ditches three or four feet wide, one on the northern, and the other on the eastern margin of the meadow, which were made to answer for the division fence, and forming a juncture near the dam, partially drained off the surplus water. In the summer of 1836 I dug two ditches three and a half feet wide by two or more deep, lengthwise of the meadow, and terminating in the ditch on the north end, thus dividing it into three nearly equal lots. From this time I ceased to flow it in the winter, and it soon became much drier; the quantity of hay decreased more than one half, with no perceptible improvement in the quality, and in one or two years the whole meadow settled nearly two feet, apparently leaving about three inches of the surface entirely detached from the vegetable deposit, or soil

below. In this situation it remained till the autumn of 1847, when I began to reclaim. Two men in ten days, with the common grub hoe and manure fork, pealed the whole top, and threw it into heaps a little larger than common sized hay cocks. This was easily accomplished, for the men would often take up a flake a yard square at once with little effort, and leave a surface as smooth as the house floor. I set fire to this topping as soon as it was dry enough to burn, but the peaty soil below ignited, and the fire was with difficulty extinguished. It was all removed to the upland, some on handbarrows, but mostly by the ox team after the ground had frozen hard enough to bear, and was used to replenish the hog and cow yards, after selling a very large quantity to my neighbors, sufficient to defray all the expenses I had thus far incurred. The first of August, 1848, I hired three robust Irishmen for one dollar and a quarter per day each, and they were to find their own board, and one of my hired men upon the farm worked with them half a month. In forty days, with wheelbarrows and a tier of plank extending half across the meadow from the adjacent bank of gravel on one side, and then from the ridge on the other, they covered the whole surface from three to four inches deep. After the middle of September I sowed three bushels of red top and three pecks of herds grass, and two men in one day raked in the seed. For the want of rain and a top dressing of manure, the grass seed made a poor show that fall. In the following March, before the ground had thawed, I purchased twelve cords of manure in my neighborhood, which was carted and spread evenly over the meadow. I then sowed twelve pounds of clover seed, and in July following I cut what was estimated by competent judges to be five tons of handsome hay, and in September two tons of rowen. The meadow was now hard and solid enough to bear the team, and the hay was all carted off without difficulty. In November last, I mixed two cords of stable manure with four cords of loam from a barn cellar I was then digging, and spread the same on about one third of the lot. In March last I spread three and a half cords of stable manure on another third, and upon the remaining third I spread one hundred and fifty bushels of leached ashes.

The hay this year has all been weighed at the town scales. The first cutting in July weighed a few pounds less than seven and a half tons, and the second in September a few pounds over three and a half tons, making eleven tons this year, and the product of the two years eighteen tons. The manure and the ashes, exclusive of the loam from the cellar, which has been put upon this land within two years, amounts to twenty cords, and including the expense of carting and spreading, has cost one hundred dollars. I paid the three Irishmen for labor one hundred and fifty dollars, and estimate the labor and board of my man at twenty dollars more, making the whole expense of reclaiming and manuring amount to two hundred and seventy dollars. From 1836 to 1848, this piece of land was worth nothing, except as a deposit of muck to increase the compost heap. The annual crop of hay would not pay the cost of harvesting. And now, from your personal inspection of this reclaimed meadow, I think you will agree with me in saying, that for pleasantness of location and convenience of access to my buildings, it can hardly be exceeded; and that at two hundred dollars per acre, which it will now sell for, it would be a better investment under good management hereafter, than any of our eight per cent Railroad Stocks.

Wenham, Oct. 5, 1850.

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## CALVIN LOCKE'S STATEMENT.

The reclaimed meadow, containing one and nine-sixteenths acres, submitted to your consideration, was in 1842 a thick alder swamp, flooded with water full three-fourths of the year, in the winter to a considerable depth. I commenced working on it in November or December of that year by cutting two ditches through the length of it, one on each side, receiving for my pay the alders growing on the margin of the same about one rod in width, without any reference to making it a mowing field, but merely to drain the ground. Before I had progressed far I became convinced of the prospective productiveness of

the soil, which is alluvial from one to two feet deep, and made a bargain to lease it for twenty years. During the winter of 1843 I cut off most of the alders, and in 1844 cut the remainder. A part of them were cut in the usual way of cutting alders for fuel; a part were taken out by one man taking hold of the clump and pulling from the man with an axe on the opposite side, while he goes round and cuts the large roots, when they will very readily come out whole. I think this far the cheapest and easiest way of getting them out. I should think I cut on the piece more than fifty loads for three cattle. A part of these I sold for from two dollars to two dollars and fifty cents a load—I might say their average value would be two dollars and twenty-five cents. In 1845 I commenced getting out the roots, first with a bush puller and then with a plough, which I think much the best instrument. I should think we spent about six days with three men and two yoke of oxen, clearing about an acre from roots and ploughing it. The roots we piled up and covered with clam shells and burnt them into lime with the roots, and then laid them out in hills, and planted potatoes on them, which went over about half an acre. The other was manured with one load of manure from the barn and two cords rock-weed mixed with stuff thrown out of the ditches. Of the three kinds of dressing used, I consider the contents of the root and shell heap the best. The potatoes grew finely, and gave promise of a good crop had it not been for the blight, which rendered them almost worthless. In 1846 I cleared the remainder of roots, and ploughed the whole, sowing that part planted with potatoes with oats, and the new piece I planted with potatoes, using about one and a half cords manure. The oats grew very rank, so as to lodge, producing a great quantity of straw, I should think more than two and a half tons, with very little grain, and the potatoes a middling crop. It was my intention to have ploughed and sowed it after the crop came off, but on account of heavy rains in fall and spring, I was not able to do it until late in May 1847. The produce of this year was a great crop of weeds with the young grass, which I nearly gave away for taking off. In 1848 I cut five and a half tons of first quality market hay when it was

weighed from the field, holding out nine thousand one hundred and ten pounds in Boston market, leaving one thousand three hundred and ninety pounds for shrinkage and feeding the teams of the hauler. In 1849 the crop amounted to eight thousand two hundred pounds when weighed from the field, and seven thousand five hundred pounds in market, falling short seven hundred pounds, of a quality a little inferior to the first, although selling as high as the average. In 1850 the weight of the crop was about four tons, remaining as yet unsold. All the dressing this land has received since it was laid down, was about ten bushels of ashes on a part of in 1848, and about fifteen bushels in 1849, and two casks of lime.

I should be glad to be more particular in my statement as to loss and gain, but general and imperfect as it is, I submit it to your consideration.

Ipswich, Sept. 25, 1850.

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## ON THE CULTURE OF THE CRANBERRY.

No entry has been made for the Society's premium for the cultivation of cranberries. Bnt the chairman of the committee submits the following communication, in the hope that it may not be without interest, and may excite to further experiments.

The Cranberry or Oxycocus, is so called from the Gr, oxus, sour, and Kokkus, berry, on account of its acidity. It is found from the Middle States to Hudson's Bay, and perhaps farther north. The European cranberry has been found in Lynn woods, and is distinguished by its short pointed leaves. It is very common in Russia, and other countries in the north of Europe; it bears a close resemblance to the common American cranberry, but is rare in Massachusetts. The earliest description of our cranberry that I have been able to discover, is to be found in an old, quaint, and very scarce book, describing the Natural History of our country at the period of its first settlement. It was published in London in 1672, and was writ-

ten by "John Josselyn, gentleman," and was entitled "New England's Rarities, discovered in Birds, Beasts, Fishes, Serpents and Plants of that country." Josselyn, who visited New England in 1638, and gathered his materials for his New England Rarities, probably saw the cranberry in common use both by the Indians and English, at that early period of our history. Here follows Josselyn's description of this plant: "Cran Berry or Bear Berry, because Bears use much to feed upon them, is a small trayling Plant, that grows in Marshes, that are overgrown with moss; the tender Branches [which are reddish] run out in great length, lying flat on the ground, when at distances they take Root, overspreading half a score acres, sometime in small patches of about a Rod or the like; the Leaves are like Box, but greener, thick and glistening; the Blossoms are very like our English Night shade Flowers, after which, succeed the Berries, hanging by long small foot stalks, no bigger than a hair; at first they are of a pale yellow Colour, afterwards red, and as big as Cherry's, some perfectly round, others oval, all of them hollow, of a sour astringent taste; they are ripe in August and September. They are excellent for the Scurvey. They are also good to allay the furvour of hot Diseases. The English and Indians use them, by much boyling them with Sugar for sauce, to eat with their meat, and it is delicate sauce, especially for roasted mutton. Some make tarts with them, as with Goose Berries."

Such is the history and use of the cranberry in the days of the Pilgrims, written in their peculiar style, probably not twenty-five years from their landing at Plymouth. The plant, called in some parts of Maine, the "Mountain Cranberry," is used there for culinary purposes, like our common cranberry. It is a very rare plant, being as yet discovered but in one spot in Massachusetts, and that occurs in a pasture in North Danvers. It is the vaccinum vitis Idæa. L. [Cow Berry.] It can be used as the common cranberry, but is inferior to it. We have not had it a sufficient length of time under cultivation, to form an opinion of its value. The High Cranberry, or viburnum opulus, is a handsome shrub rising from six to ten feet high, and bearing an acid fruit somewhat resembling cranberries. It has been

recommended by some persons as a good substitute for the cranberry, and on that account worth cultivation, but we have not found it so, the fruit is very acid and bitter, containing a large oblong nut. It is, in our opinion, a shrub much more ornamental than useful. The cranberry can be successfully cultivated in any good soil, not absolutely dry. It prefers a moist soil, and still better a sandy peat. In the selection of plants for the purpose of cultivation, we should choose those growing in low grounds, near the upland, in preference to those found in wet, mossy meadows. We think the autumn a favourable season for transplanting the cranberry, as they can more readily be taken from low wet lands. In removing the plants, it is best to take up a sod of earth with them, carefully picking out the grass. These may be set in a bed, prepared like one for strawberries, in rows twelve or eighteen inches apart, and as the vines extend by sending out runners, they should be covered with earth to cause them to take root. Care should be taken to keep the bed free from weeds and grass. The plants of the cranberry under cultivation, need protection in winter. This, it will be recollected, they always receive in their wild state in the meadows, by the overflowing of them by water. They are best protected by covering them with the boughs of some evergreen tree or shrub. I prefer for this purpose the prostrate branches of the juniper, called by some persons ground hemlock. When this cannot be obtained, meadow hay, sea weed, or litter may be used. When the vines are covered with the boughs of some evergreen tree, the fruit can be kept on them in a very fresh and excellent state, during winter, and used as required. I was somewhat surprised to find my cranberries the past season, infested by an insect unknown to me. These, resembling a worm or maggot, were discovered in the berries when about half grown, eating out its pulp, and destroying, I should think, half of my crop. Several of the cranberries containing worms were sent to Dr. Thaddeus W. Harris, the distinguished entomologist, who, in reply, informed me that he found the insects to resemble closely the well known "apple worm" and adds, the question of their identity, however, can be settled by keeping them, till they undergo their transformations.

In closing this communication, I would say that what I have written upon the cultivation of the cranberry, has come under my own observation, and is confined to garden culture. What the cranberry would do, with its delicate fibrous or hairy root, adapted to a sandy peat or a sphagnous bog, when transplanted to a dry soil, in an open field, with nothing to protect its roots from the frosts of winter, is more than I can say. Those persons who have had much experience in the cultivation of native plants, found growing in swampy or very wet land, will have noticed that many plants will accommodate themselves to a comparatively dry soil, and the cranberry may be one of those plants. After several years experience in the garden culture of the cranberry, I can see no obstacle in the way of complete success, provided the same care and skill are bestowed upon it, that are rendered to a bed of choice and tender strawberries.

SAML. P. FOWLER.

Danvers, Nov. 6, 1850.

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## ON FRUIT TREES.

The Committee visited in the course of the season, the several orchards and plantations of trees, to which their attention was called, viz: Dr. Royal A. Merriam's, Wm. G. Lake's and Moses Pettingil's, in Topsfield, Francis Dodge's and Lewis Allen's, in Danvers, and Amos Gould's in Wenham, and others to which they were not specially invited.

The statements of the several claimants will best explain the particular quality of the orchards. The committee will add a few remarks expressive of their own impressions. But two parcels of pear trees were presented to their attention. Mr. Pettingil's trees were set in 1846, immediately after the premium was offered. Care was taken by him to obtain trees of fine quality, and of the best varieties of fruit, from Mr. Manning's nursery. They were set in a soil admirably adapted to their growth, and have since been watched with the best attention.

They have grown remarkably well, nearly all the trees being now thrifty, and in bearing condition. In the intermediate spaces between the trees, an orchard of peach trees has been cultivated at the same time, which have been highly productive of some of the best varieties of peaches that we have met. The committee were highly gratified with the success of Mr. Pettingil's experiment, and can with confidence refer to it, as a good illustration of what can be done by intelligent culture of this kind of fruit. Some half a dozen of the best varieties of pears presented at the exhibition of fruits in Salem, grew upon these trees, that have been set within the last five years. The committee are pleased to award the first premium of ten dollars to Mr. Pettingil.

Dr. Merriam exhibited to the committee some handsome pear trees, that have been cultivated with much care and attention. With the appearance of these trees they were well pleased. The committee were not aware that the number came up to what the conditions required, until they read his statement. Not being aware of this fact, they had not supposed there was any competition in the claim for the premiums offered; under this state of facts, they did not feel at liberty to award any premium the present season. When the trees are more fully grown, they will probably be more likely to arrest the attention of visiters.

The competition for the premiums offered for apple trees was greater, there being four distinct claims. The trees of Amos Gould, of Wenham, were thought by the committee to be entitled to the first premium of ten dollars. They have been cultivated for three years past with marked attention. They were selected at first from one of the best of nurseries, and from the best trees of the nursery. These are facts, in the opinion of the committee, of great importance. It may be, after a growth of ten years, ordinary trees at first, will overtake those that were more promising; but such an event is not probable. Mr. Gould's trees are in very fine condition, and are a good illustration of what can be done by careful attention.

Lewis Allen, of Danvers, to whom is awarded the second premium of eight dollars, has an orchard of a larger number of

trees, which have been cultivated with much attention, and are now in good condition. They have not been set out so long as Mr. Gould's, and have not a character so firmly established. Both of these gentlemen have selected the Baldwin apple only for their orchards. Although this apple is to be admired for its many superior qualities, still there are other good varieties, and we should prefer to have several kinds at command.

The orchard of William G. Lake, of Topsfield, was viewed by some of the committee. A part of his trees are in very fine condition. Had it not been that others viewed were deemed superior, the committee would have been pleased to have given him a higher premium. They therefore award to him the third premium of four dollars. Mr. Lake has been very successful in his cultivation of trees in his nurseries. No one can complain that he does not present a sufficient variety of fruits. If we do not mistake, he exhibits as many as fifty varieties of apples, of his own raising.

Dr. R. A. Merriam, of Topsfield, has taken much pains to lay the foundation for an orchard of about two hundred trees. He has set apart an ample enclosure for this purpose, and in a good position. Many of the trees are growing finely and promise well, others are less promising. There is great inequality in their appearance. The grand mistake, if any has been made, was in the selection of his trees in the first instance. The contrast between Dr. Merriam's and those in the other orchards viewed, is a good illustration of the necessity of care and liberality in the first selection of the trees. If the Doctor's trees, five years hence, shall be found to have overtaken in their growth, those of his competitors, then the committee will cheerfully admit their mistake in their own notions.

Some of the committee were anxious that the attention of the Trustees should be called to the importance of offering premiums for the introduction of some new variety of apple, instead of the cultivation of those now most esteemed. Instance, if any one could bring forward a new apple, that would compare with the Baldwin, the Danvers Winter Sweet, or the Hubbardston nonesuch—all of which have originated in Massachusetts

we believe within the last century,—he would be a public benefactor.

The advantages to accrue from the cultivation of the Baldwin apple, are well illustrated on the farm of Francis Dodge, of Danvers, to which the committee were invited, and by whom they have been favored with a statement of the produce of his orchard the present year. Mr. Dodge's trees, about forty-five in number, were set about twenty years since, in a field of seven acres, by the wall, thirty-five feet apart. Ever since, care has been taken to keep the land in good condition, and every thing has been done to promote their growth, without incurring any unreasonable expense. The present year, the trees have yielded him more than six barrels of fair apples to a tree, many of which sold for two dollars per barrel. The value of their produce, exclusive of the labor of gathering and taking to the market, cannot be estimated less than three hundred dollars. At most these trees cannot be estimated to occupy more than one acre of land. In what way can a farmer apply his acres to a better purpose? At the same time he brings money to himself, he carries health and comfort to all who are furnished with his apples. This is more than can be said of many other products, especially those that pass through the distillery.

The extraordinary produce of the Baldwin apple the present season is worthy of special notice. Universally have these trees borne a full crop. We have known single trees, not over thirty years old, to yield fourteen barrels, and three trees together to yield forty barrels. We know one young orchard, where the proprietor picked with his own hands forty barrels in one day.

We forbear to extend our remarks on this subject, as they may be thought not entirely within our province, nevertheless, if we could convince our farmers of the benefits to accrue to them and their families, from more assiduous attention to the cultivation of good fruit, we think a good service would be accomplished.

A. T. NEWHALL,
CHAIRMAN OF THE COMMITTEE.*

Salem, Nov. 15, 1850.

* A. T. Newhall, of Lynnfield, J. W. Proctor and Benj. Porter, of Danvers, Joshua H. Ordway, of West Newbury, Eph. Wood, of Salem.

## SUPPLEMENTARY REPORT ON FRUIT TREES.

The committee were instructed by the Trustees to take into consideration the theory, that the "chance of life in a scion is affected by the chance of life in the original seedling which began the species." It will be recollected, that it was distinctly asserted in the address before the Society in 1849, that "we cannot prolong the existence of any particular kind of fruit, by engrafting from old to young trees, beyond the natural life of the original tree, or the time it would cease to bear fruit by old age, if living." Doubts having been entertained by some, of the correctness of this assertion, it was thought to be a fair subject for inquiry. For if it be true, then before we begin to cultivate particular kinds of fruit, however superior they may be, we must inquire not only into the quality of the fruit, but as to the time when it first came into being. It being generally admitted that the age of the apple tree is about two hundred years—our oldest fruits will have to give place to those of later origin. The experience on our own shores is too limited to furnish facts to answer this inquiry in a satisfactory manner.

On looking into English books we find one of their most celebrated apples, the Golden Pippin, spoken of by Evelyn as early as 1660, as being greatly admired and much cultivated. It has continued to be so ever since. Perhaps it will be said, there is no certain evidence that the fruit now passing under this name, is a direct descendant of the original stock. It may have come from seedlings, so like the original, as to be incapable of being distinguished. This is possible, though not probable. Human life is too short, for the testimony of the same individual to be applicable to the beginning and the end of any particular variety. The culture of trees, in this country at least, has not been so scientifically and systematically pursued, as to warrant confident assertion on the subject.

The Newtown Pippin, a native of Long Island, one of the most celebrated American apples, has been known and cultivated for one hundred and fifty years, at least. The original stock has been dead fifty years or more. But still this variety is now cultivated as extensively as ever, without any indica-

tions of old age. If THREE FOURTHS OF ITS PERIOD is past and gone, might we not expect some indications of approaching decay?

The Baldwin, the most popular and most valuable of all our Massachusetts apples, has now been known for more than one hundred years. Never was it in more vigorous condition than the present season,—yielding more than all other sorts combined. Whether the original tree, that was MARKED BY THE WOODPECKER, at Wilmington, County of Middlesex, and taken into the care of Col. Baldwin, is still living, we are not advised; but if it be not, and has already gone down fully ripe, if this theory be true, it is important to cultivators to be distinctly informed, before they set out trees, whose days are numbered. When we took our pen in hand, we hoped to have been able to throw some light on this subject, but the more we investigate, the less confident are our impressions.* We will not presume to deny the assertion of our Chairman, who brought it forward, nor can we yield entire assent to the theory. In considering the causes of the decline, or running out, of particular kinds of fruit, the exhaustion of the fruit bearing

* The oldest fruit tree we have ever seen, and probably the oldest to be found in New England, whose history can be authentically traced, is the Endicott Pear Tree, (so called,) on the farm now owned by one of the committee. It can be certainly traced two hundred and twenty years. Many others were then set, in what was called the orchard, all of which are now gone. On the same farm, there are now many trees, bearing what is called the Endicott apple, probably produced by scions taken from the same orchard. The history of the apple trees is less certainly known than the pear tree. Eighty years since the pear tree is remembered to have been quite large and productive. An accident then happened to a boy, who fell from its upper branches to the ground, who *sixty years* afterwards, was accustomed to speak of his adventure with much sensibility. This pear tree has made wood the present season, on its principal branches, from *six* to *twelve inches*. These scions have a healthy and vigorous appearance, and offer an opportunity to those, who believe the variety can be prolonged another *hundred years*, to test the experiment; as did the philosopher, who having heard that a crow would live *a hundred years*, bought one to try the experiment.

Apples were exhibited at the show in Salem, this year, that grew on a tree in *Marshfield*, Plymouth County, said to be two hundred years old. Their appearance was fair and sound. They were too hard to be tasted. Pears were exhibited that grew on a tree in Salem two hundred and ten years old.

qualities in the soil, is to be regarded. From our earliest years, we have heard the remark, that a young orchard will not flourish well, where an old orchard has been. Such sayings do not become common, without some foundation,—although those who use them may not be able to give a reason for the faith that is in them. Perhaps, as a general thing, it may be the soil and not the fruit, that declines. Still we think there are cases, in which decline is peculiar to, or inherent in, the particular variety. This is probably true of the Nourse Sweeting, so distinctly recollected by the chairman in his youth. Calling to mind the recollection of many varieties of apples that were cultivated and much esteemed in our youth, which are not now to be found, at first thought, seems to corroborate the theory. Nevertheless, we have no such certain data respecting them, as will warant definite conclusions. Mr. Newhall showed the committee trees on his own farm, that were grafted sixty years since under his own observation, scions from which he has attempted to propagate, without success, from which experiments he has confidence in his views, which are distinctly expressed in his letter hereunto annexed.

For the Committee. J. W. PROCTOR.

Danvers, Nov. 20, 1850.

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ASA T. NEWHALL'S LETTER.

To J. W. Proctor.

Dear Sir,—Upon the subject of decay by old age, and final extinction of varieties of the apple, and the necessity of raising new varieties from the seed, I can add but little to what I have already said. But, in compliance with your request, and desirous as I am that the subject should be fully investigated, that we may arrive at such conclusion as may in some measure assist orchardists to pursue a course that will ensure longevity to their orchards, I will state something of the experience and observation I have had the past year.

I have carefully noticed the different varieties of soil and

culture upon which the trees stand, on which I have engrafted old varieties of the apple, and I find that the same kinds of fruit bear the same marks of old age, notwithstanding the advantage some of them have had of soil and culture. Most of the stocks on which these old kinds are now growing, or rather decaying, appear to be vigorous, and in many instances to send out new shoots, but unless a new top can be grown from the trunk, it must finally expire, as does man in youth, or middle age, by diseased lungs, when all other parts of the system are perfect.

The seed for a nursery ought not to be taken from grafted fruit, but from a seedling, that has arrived at maturity, or to a state of strength and vigor, which is in accordance with the laws of nature,—for the progeny of early youth or old age are inferior to the productions of middle age.

That our orchards are deteriorating very fast, in consequence of our anxiety to obtain an early harvest of fruit, by budding or engrafting, must be apparent; in consequence of which our orchards bear the marks of premature old age, and there seems to me to be no alternative, but to raise new varieties from the seed.

I think there can be no doubt of the utility of offering large premiums for new varieties of seedlings. If one thousand dollars were offered for six, eight, or ten kinds, to be paid in ten or twelve years hence, that should be equal or nearly so to the same number of the best kinds we now have, I would be bound to pay the premiums, if I might have the profits to be derived from the buds or grafts of those trees for ten years.

November 15, 1850.

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## AMOS GOULD'S STATEMENT.

I enter for premium seventy-nine apple trees, set out on my premises three years ago this fall; seventy-three of the trees being in one enclosure, and the other six in an adjoining lot. They were procured all at the same time, nearly all of which

are Baldwins, from the nursery of Allen W. Dodge, in Hamilton, grown on light soil, and not forced by high culture. When transplanted, they were two years old from the bud, and consequently are now five years from the bud. A part of them were set in land that had been cultivated two years, and a part on land broken up that fall. This last named land has been kept under cultivation to the present time, and the trees upon it have made a much better growth than those upon the other land, which was laid down to grass the following spring, although it was dug round the trees the two seasons after. All of the land was this year ploughed and planted, expressly for the benefit of the trees, so well convinced am I that in this way the thrift of trees is best promoted.

The trees were set out with the utmost care, occupying two men for two days, the holes having been dug previously. About three pecks of compost manure were placed round the trees after being set, and the same quantity has been applied each fall since. Early in the spring this manure has been dug in, and about a pint of air slacked lime strewed over the surface of the ground near the tree. In June I have applied about a quart of ashes near the trunk of the trees, to prevent the depredations of the borer, which I think has been effectual. I have also, early in June of each year, washed the trees with a composition of about equal parts of lime, clay and cow manure, well worked together, the effect of which is to keep the trees smooth and free from moss and insects. This annual washing I have practised for some years, and shall continue to practise, as long as I own a tree—its beneficial effects being to me so apparent.

Wenham, Oct. 7, 1850.

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## LEWIS ALLEN'S STATEMENT.

My orchard of young apple trees contains two hundred Baldwins, one hundred and sixty of them in one enclosure, the remainder in a lot adjoining, with other varieties. One hundred of these trees were set in the spring of 1848, the other hundred

were set in the spring of 1849. They were selected from several nurseries, always taking care to get trees about the same size, and the fairest in appearance. They were generally two or three years from the bud. At the time of setting, holes were dug four feet square, the top soil thrown on one side, and the sub soil on another; the hole was then partially filled with soil, to the depth of one foot, the tree was then inserted, and filled about with soil, and the sub soil taken out was spread around. No other manure was applied to the trees, except the general dressing upon the ground. The trees were set about thirty-three feet apart each way, covering about two acres.

The land is a gravelly loam, and previous to the year 1844, it had been a common pasture, when it was ploughed to kill the wood-wax, with which it was fully covered. Since that time it has been under cultivation with the various kinds of hoed crops, except that one part of the lot was sowed with barley the last season. Where the barley grew, the trees did not grow. I am satisfied the crop opearted unfavorably upon the trees. Eleven of the trees among the barley died; I have supplied their places with others.

Most of the trees have made a handsome growth of wood, and now have a smooth bark, and a healthy, vigorous appearance. I consider them fairly rooted, and with the ground fairly manured, I have reason to believe, in a few years they will be in condition to well reward all expense of cultivation and use of land. I did not think of asking your attention to these trees the present season, until requested to do so.

Danvers, Oct. 15, 1850.

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## WILLIAM G. LAKE'S STATEMENT.

My orchard, offered for your consideration, consists of seven hundred apple trees, standing upon about seven acres of land. They were all set out in the years of 1848, '49 and '50, about an equal number each year. They were all two years upon the bud when set, and the most unsaleable trees in my nurse-

ry, with the exception of one hundred and seventy-five, which were as good as any in my nursery at that time. The ground has been ploughed and planted each year. The other orchard contains eighty trees, set out in the fall of 1844; two shovels full of manure was applied to each tree in the fall.

The following are the kinds of fruit:—For winter—Northern Spy, Lady Sweeting, Baldwin, Greening, Roxbury Russett, Danvers Winter Sweet. For fall—Hubbardston Nonsuch, Fall Harvey, Kilham Hill, Gravenstein, Porter, Aunt Hannah, Minister, Yellow Bellflower, Luscomb, Alexander, Dutch Codlin, Maiden's Blush,—with several other kinds of new fruit, which I have not fairly tested.

Topsfield, Oct. 9, 1850.

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## MOSES PETTINGIL'S STATEMENT.

I offer for the Society's premium, my orchard of Pear trees, which consists of thirty-six trees, set in the spring of 1846. The land on which they stand is a strong, dark loam, with a clayey sub soil. It had been cultivated for two years, and was in a good state for transplanting. The varieties are as follows: Seckel, Beurre Bosc, Winter Nelis, St. Ghislain, Summer Franc Real, Golden Beurre of Bilboa, Pope's Russet, Dearborn's Seedling, and Pound Pear. In the spring of 1846 I dug the holes for the trees, twenty-five by thirty feet apart. I made them eighteen inches in depth, and four feet broad, and mixed with the soil some manure to each hole. I then set out the trees; they all lived, and made wood the first year from four to twelve inches. In the autumn of 1846, '47 and 48, I put around them half a bushel of barn manure to each tree, and in 1849 I manured with muscle mud, and in the spring of each year I dug the manure into the ground. The trees have made good growth, and the present season from twelve to forty inches.

In 1846 I planted the land with a peach nursery, and raised a good crop of trees that I have sold, leaving seventy as standards, from which I have received a good crop of fruit the past

two years. I think they are a protection to the pear trees. Of the diseases of the pear tree I have had but little knowledge; I have experienced the frozen sap blight, but as for a remedy, I leave it for others to propose one.

Topsfield, Oct. 16, 1850.

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ROYAL A. MERRIAM'S STATEMENT.

The orchard of young fruit trees which I offer for premium, was set out in 1848, this being the third year from planting out, the fifth from the bud, and the seventh from the seed. The lot of ground contains about two and a half acres, surrounded by stone wall, the borders having older trees, which by grafting, have been renovated, four years since. Nothing is allowed to feed upon it; it has been improved as mowing and tillage land for forty or fifty years, has a southwesterly aspect of a hill side, the soil a deep black loam, with a full supply of wall stones on the surface.

Two hundred young trees stand on about two acres; half from Lake's nursery, (not the largest growth,) and the other half were natural trees, planted but not worked, all of the same age. The natural trees were grafted last June; the whole in the lot intended for the Baldwin apple, excepting some failures, which have been supplied with the Danvers Winter Sweet and Hubbardston Nonsuch. As I intend not to admit any feeding off the ground, I have allowed the trees to branch out low.

The ground was prepared, by ploughing, in the autumn of 1847, in strips of five furrows twenty-two feet apart, and the trees stand in these strips, about the same distance apart. A square of four to five feet was dug the next spring, one foot deep and taken out, and six inches more loosened up in the sub soil. One bushel of pulverized meadow muck was put into the pit mixed with the top soil, and the tree placed in the hole with the roots nicely spread out and covered, adding about two shovels of straw manure near the surface, and covering lightly with the remaining sub soil. The ground, from four to six feet square about the tree, has been cultivated and kept free

from grass or weeds, hoeing three times a year. Since planting out in 1848, the trees have been manured once by about two shovels of well rotted manure to each tree.

My object in using unworked trees for a part of the ground, is an experiment. It has been advanced by some pomologists, that the tap root was necessary for the perfection and longevity of the tree. Although we could not get the whole of this root, we were able to get from one to two feet of it. The seeds of these natural trees were planted in earth that had been moved, (the bank of the turnpike,) and the tap root had penetrated to the depth of three or four feet into the bank, with few lateral fibres, and after transplanting, in removing some ordinary trees, I found that the lower end of the tap had started again downwards.

I think there is little doubt but fruit will be taken from these trees in the course of three or four years; the natural trees may be some later, but I think not much. The grafter, who has made grafting and pruning his business for fifteen years, and who has laid up many good ideas upon the working of trees, thought he should be as willing to take the chance of the natural as the nursery trees.

Some Pear trees, set out and grafted since 1846, about thirty in number, are likewise presented to your notice for premium. These trees were taken from the forest, in a perfectly wild state, of different sizes and ages. They were trimmed root and branch of all their superfluous wood, viz. roots that were injured, and very long roots shortened, and were carefully set in a garden soil and cultivated with the garden, and generally grafted the second year after transplanting. They are now far in advance of nursery trees which I set out in 1844 in the same soil. They were of different sizes, several being ten feet high, and all promising. They were set from ten to fifteen feet apart, in a part of my garden where formerly was a blacksmith's shop. Several of them the present season have made from two to three feet of wood, none less than one foot.

It was remarked by one of the committee, when viewing the trees, that the ground was very suitable for trees. Whether the ferruginous ingredients of the soil, or the charcoal, (which

was mostly used in the days of the blacksmith's shop,) have any special influence, may be a question of some importance, or whether the removal from an uncultivated to a cultivated soil, has had a favorable effect, I will leave for the more skilled to determine.

Topsfield, Sept. 1850.

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FRANCIS DODGE'S STATEMENT.

I offer for your inspection forty-three Baldwin apple trees, enclosed in one field containing between seven and eight acres, on my farm in Danvers, being part of a row around the whole field, and all the bearing ones excepting four Kilham Hill trees. They are thirty-five feet apart, and twelve feet from the wall. The other trees in the row are younger, and have been set to fill vacancies at various times within the last ten years. The field on which the trees stand is what might be termed a run, and was cleared twenty-three years ago. There is a covered drain in the field, running the entire length, about in the centre, the ground rising on both sides of it. The ground also rises from both ends, making the highest point of land about midway of the piece, the water running from the centre to both ends of the field all the year. The land on the south side of the drain is of a loamy character, that on the north is rocky, wetter, and more inclined to clay. The trees have done the best on the north side, and the fruit has been larger. The trees were set in the fall of 1828, and the land laid down the following spring. I have no knowledge of the mode of cultivation previous to 1840, as the field was not in my possession until that time.

That spring they were pruned, and have been every successive spring since. In pruning them we have endeavored to keep a well balanced head, cutting off all riders and suckers. In the spring of 1843 the land under the trees was ploughed as far as the longest limb extended, and has been ploughed both fall and spring ever since, putting on a coat of manure of about

five cords to the acre in the spring, and ploughing in immediately, being careful at each time of ploughing not to injure the roots. The two first years I planted the ground with hoed crops, but since that time the ground has been sown with some small grain in the bearing years, and planted with hoed crops every other year. By this method the windfalls are kept from the ground, and the apples are not so liable to bruise from falling. For the last ten years the trees have been scraped and washed with potash water or strong soap suds, every other year. The crop of fruit has been as follows:—In 1840 and '42 there were a dozen barrels each year; in 1844 there were fifty barrels of picked apples; in 1846 one hundred barrels; in 1848 one hundred and twenty-five barrels picked, and thirty-five of good windfalls that brought in market from a dollar to a dollar and a quarter per barrel, also a large quantity of poor apples that were sold for cider apples. The apples that year in this county were unusually wormy. This year there were two hundred and sixty-seven barrels of picked apples, and thirty barrels of good windfalls.

Danvers, Nov. 7, 1850.

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## JOSHUA H. ORDWAY'S LETTER.

The following letter, that came to hand after the report was sent to press, is deemed sufficiently valuable to be published entire.

West Newbury, Nov. 23, 1850.

J. W. Proctor, Esq.

Dear Sir,—Yours of the 16th inst. is before me. You rightly understood my suggestion, at Salem, in regard to the importance of raising new varieties of fruit. They should be raised from the seed of fruit,—not from highly cultivated kinds,—but from nature's healthy seedling trees.

I can see no special benefit to accrue, from continuing premiums for pear or apple orchards, that are already set out with existing old varieties. They will grow just as well without aid from the Society, as with.

I am aware that most pomologists are of the opinion that trees may be propagated indefinitely by budding or grafting, and without examination have adopted that theory, and thus foreign varieties have been extensively cultivated, to the neglect of new varieties of our own.

Nature has fixed laws, is ever true to them, and cannot be crowded off the track. If this theory is the law of nature, all existing varieties of fruit must in their own time cease to exist. You will then understand why I consider it of so much importance to endeavor to introduce new and improved varieties.

I am of opinion that the pear has been cultivated so long by suckers, from old trees, that it may possibly become extinct. The old trees have lost their vitality, and cannot transmit life to their seed. This seems to me the reason why we have so many failures in pear seedlings. I seldom see a young pear tree, they are little old ones, just ready to die.

You will make such use of these hasty suggestions, as you deem best calculated to advance the culture of new and improved varieties of fruits.

Respectfully yours. JOSHUA H. ORDWAY.

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## ON FRUIT.

The Committeee Report, that the exhibition of Fruits was this year united with that of the Essex Institute, under whose judicious direction the arrangements for the display were made, and an unusually satisfactory exhibition secured. The committee feel warranted in saying, that this show has not only been superior to any previously made by the Society, but that it has been fully equal to, if it has not surpassed all similar exhibitions in the State; this comparison particularly applies to the show of Pears. Without further remark, we proceed in behalf of this society to award the usual gratuities.

To Robert Manning, W. G. Lake, Charles F. Putnam, Moses Pettingil, and J. M. Ives, two dollars each. John C. Lee, three dollars. Ephraim Brown, John F. Allen, Ephraim Emerton, and J. S. Cabot, one dollar and fifty cents. To Andrew

Lackey, one dollar and twenty-five cents. To S. Driver, James Upton, Augustus D. Rogers, James Eustis, and Ephraim Woods, one dollar each. To David Roberts, John Bertram, N. B. Mansfield, E. R. Mudge, and Samuel C. Pitman, seventy-five cents each. To J. H. Nichols, Wm. Stearns, Winthrop Sargent, B. H. Silsbee, W. D. Pickman, and George W. Gage, fifty cents each. To J. H. Phippen, Geo. Andrews, Ezra Dodge, Andrew Dodge, W. C. Barton, Samuel Kemp, John Pratt, Wm. Sawyer, John K. Poor, Aug. T. Wellman, Henry Wheatland, J. A. Goldthwait, Samuel Sawyer, M. L. Atkinson, F. W. Tuttle, Thomas Dixson, Rufus Slocum, Samuel T. Huse, and N. B. Perkins, twenty-five cents each.

The committee of the Essex Institute have prepared a detailed report or catalogue of the fruit shown, which is inserted in the Transactions. The Society, by a vote of its Trustees, requested your committee to select from this catalogue a list of such varieties of Pears which in their judgment are the most desirable for general culture, to be appended to this report. Having prepared a list of twenty-five varieties, all of which have already been well tested in this vicinity, they submit them to the Society. Viz:

Summer Pears—Rostiezer, a German variety, of the size and flavor of the Seckel; Bloodgood, fine native fruit, requiring a warm and rather dry soil.

Autumn Pears—Harvard, (native fruit; Dix, (do.); Seckel, (do.); Heathcote, (do.); Fulton, (do.) a great and constant bearer; Lawrence, (do.); Beurre Bosc; Flemish Beauty; Urbaniste; Bonne Louise de Jersey, good bearer upon the Pear stock, finer upon the Quince. The above require a strong, rich and tenacious soil, particularly the Dix and Heathcote; Bartlett; Andrews, (native fruit); Buffum, (do.); Golden Beurre of Bilboa; Belle Lucrative; Cushing, (native); Long Green; Paradise of Autumn. These sorts flourish well on a light soil well manured, and the fruit is generally of a higher flavor than when grown upon a strong clay or retentive loam.

Winter Eating Pears—Winter Nelis, this is decidedly the finest early winter pear known to us; Lewis, a native fruit of fine flavor, and the tree bears annually a good crop.

Cooking Pears—Vicar of Winkfield, a fine large fruit of second quality for eating, but still one of the most profitable pears for market,—it is a good bearer upon the quince or pear stock, the fruit is larger when grown upon a strong, rich and rather moist soil; Catillac; Black Pear of Worcester.

The Winter Nelis and Seckel fruit finely when grafted upon the tops of large pear trees. The Dix and Harvard are a long time in coming into a bearing state when budded upon young stocks; we should recomend these varieties to be placed upon old and well established thrifty stocks.

Not more than one-fifth of all the newly imported varieties of pears are worthy of cultivation; many of the new sorts sent here from Europe as fruit of the first order, when brought into bearing here have proved worthless, although many of them were beautiful in appearance.

For the Committee. JOHN M. IVES.

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## ON GRAIN CROPS.

There was but one application for the premium on Wheat, that of Henry Poor, of North Andover, he having raised twenty-five and a half bushels of white flint winter wheat upon one acre of land. The committee award to him the premium of eight dollars.

The experience of Mr. Poor, and others in that part of the county, for a few years past, in growing wheat, leads us to think that winter wheat may again become an important crop for us to raise. Why it is that wheat and rye do not blight so much now as they did ten years ago, we cannot tell. We have seen the lofty Buttonwood tree wither and die without any apparent cause; the potato, until within a few years one of our surest crops, has now become uncertain,—and we know not why. We can only say that in the blight and decay of our crops we can see the effects produced, while the cause remains as yet invisible to human eyes, and inscrutable to human science. If, upon farther trial, it is found that wheat does not

blight as it did in former years, we think it will be well for the farmers of this county to turn their attention more to this crop.

There were two claimants for the premium on Rye, viz: Adino Page, on the town farm in Danvers, and John S. Hubbard, on the town farm in Newbury. Mr. Hubbard raised on one acre thirty-two and a half bushels of rye. Mr. Page raised on four acres one hundred and thirty-five bushels, making thirty-three and three-fourths bushels per acre. The committee award to Mr. Page the premium of eight dollars. From this experiment we see that when a liberal dressing of compost manure is applied to poor and gravelly soils, a good crop of rye may be obtained from them; it is not so liable to be winter killed on such soils as upon a strong and clayey soil, and it usually ripens before the dry weather affects it. The high price which the straw sells for in some markets, adds much to its value.

There was but one entry for the premium on Indian Corn, that of Joshua Foss, of Byfield. This crop was not so large as has often been raised in this county, but the committee think if the season had been favourable for the growth of corn, this would have been as large as any to which the Society's premium was ever awarded. The committee are of the opinion that by planting in rows but one way, and making the hills but a little distance apart the other way, more corn can be raised on an acre than when it is put in rows each way far enough apart to use the cultivator. But before recommending this mode of planting, they would advise all to count the extra cost of hoeing. The committee award to Mr. Foss the premium of eight dollars. WM. R. PUTNAM, CHAIRMAN.

Danvers, Nov. 15, 1850.

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## HENRY POOR'S STATEMENT.

The specimens of winter wheat are the growth and product of my farm the present year. The sample of white flint I present for premium, having obtained twenty-five and a half bush-

els from one acre, and from one and a half bushels sowing. My soil is a dark brown loam—clay subsoil. I have also tried an experiment of two varieties of Chili wheat, (see samples,) which promise well, from the fact that the heads are well filled, and berry of extra size. It is a bearded grain, produces less straw than the white flint or banner wheat. Having a few quarts now growing, I hope to be able to test its value another year, and report. Dr. C. T. Jackson pronounces it a valuable grain, from the fact that its glutinous or oily substance far exceeds the white flint, that being principally composed of starch.

I also sowed two quarts of "Banner wheat," (Kloss blue stem,) the product was thirty-three quarts. This variety appears to be the same as the White flint—I think it a superior variety. It is quite common to find scatterings of rye mixed with the wheat; as rye runs up and heads out earlier than wheat, I take the precaution to go through the field and cut off the heads. Winter wheat also makes chess grass, which is an annual, and dies out with the grain; the seed resembles dog grass, (or twitch grass.) One of our best farmers was deterred from sowing wheat this autumn, after purchasing his seed, by seeing chess seed, which he took to be dog grass.

My practice has been to plough in green sward if possible, after a hay crop has been taken off. The stubble and grass roots are of as much value to turn in, as an ordinary dressing of manure. I spread manure and twenty or thirty bushels leached ashes to the acre, and cultivate them in with the grain; leached ashes cost six and a quarter cents the bushel. I have used air slacked lime—ten or twelve casks to the acre. I have also raised thirty bushels of wheat to the acre WITHOUT ashes or lime. Gypsum would doubtless be good, where it is appropriate to the soil, but as good barn cellar manures contain all the necessary elements, properly composted, for producing ANY CROP, I doubt much the necessity of other substances to effect that object.

A good corn soil will give good wheat; the higher the dressing the better the crop. I roll after cultivating in, and also roll again in the spring; this packs the roots and branches the

grain. PROFIT is the great desideratum in all business pursuits. My wheat yielded me two dollars and fifty cents per bushel, equal to sixty-three dollars and seventy-five cents per acre, to say nothing about the straw, which is worth ten dollars more. The farmer can make his own estimates as regards expenses,—say one and a half bushels seed, fifteen cart loads ordinary manure, twenty bushels ashes at six and a quarter cents. Add to this ploughing, harrowing, harvesting, threshing, &c., (and you will bear in mind it requires no more labor to produce this crop than any other of the small grains,) and I think you will be satisfied that more value is here obtained than in any other grain crop.

Five years ago I sent a barrel of wheat, (my first crop,) to the Kennebeck, (Waterville.) It has gradually been "taking root," and at the present moment thousands of acres of green wheat fields are the only spots of verdure that have bidden defiance to the scathing frosts of autumn in that section. So great has been the wheat fever in Maine, that choice seed, (grown hereabouts,) would have commanded five dollars per bushel. This is not an exaggeration—I have it from good authority.

In the outset I intended to have been brief, but I feel that my story is but half told, and I would close by respectfully suggesting to farmers the importance of stopping their "FLOUR BILLS," by drawing from their own farms the very bread which a kind providence had designed for their comfort.

North Andover, Sept. 1850.

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## ADINO PAGE'S STATEMENT.

Perceiving that a premium is offered, "for the best conducted experiment in the cultivation of Rye," I beg leave to submit the following facts, relating to the cultivation of this crop, on the town farm in Danvers.

The field contained four acres; the produce was one hundred and thirty-five bushels, weighing fifty-seven pounds to the

bushel. The grain was plump, clean, and of as good quality as any I have seen. It was sown in the autumn of 1849, by Mr. Hathaway, my predecessor on the farm. His manner of cultivation is particularly specified in his statement of 1848, published on page thirty-eight of the Transactions of that year. Had it occurred to me to present this crop to your notice, before it was gathered, I have no doubt one acre could have been selected in the field that would have yielded more than forty bushels. I state the facts as they are, not so much to obtain a premium, as to show what such land may be made to produce, by full manuring and thorough culture. On this farm, which is a hard gravelly soil, a large number of hogs are constantly kept, and employed in the making of manure. The yard in which they are penned is constantly supplied with mud from the meadows on the farm, and the offal from the slaughter houses of the town. In this way there are annually made between two and three hundred loads of manure, a full coating of which is applied to all the cultivated fields of the farm. It is the practice on this farm to plough at all times with two pair of cattle, and a large size plough. These facts are mentioned as explanatory of the crop produced, especially as the soil is of ordinary quality. I also present a specimen of the grain for your inspection.

Danvers, Sept. 21, 1850.

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JOSHUA FOSS'S STATEMENT.

I offer for inspection a piece of land containing one acre, from which I have harvested one hundred and eighty-six bushels of ears of corn. Planted from the 10th to the 12th of May —land a dark loam, with light sub-soil. Planted in 1849 with corn—in the spring of the year it was broken up, and manured in the hole with about fifteen loads to the acre. In the spring of 1850 there were spread on about thirty loads of manure, containing about thirty bushels to the load, and about sixteen loads dropped in the hole. The corn was planted three feet

between the rows by two and a half between hills. At the second hoeing it was thinned out, leaving from two to three stalks in a hill, and at each hoeing the ground was kept as nearly level as possible. Stalks cut about the 15th of September, and all the suckers carefully taken off. The corn was harvested from the 20th to the 25th of October.

The following is the amount of labor done the present season upon this crop:—Two days work of two men and one yoke of oxen; four days hauling manure and dropping in the hill, with one yoke of oxen; ploughing and harrowing, one man and one yoke of oxen one and a quarter days; man and horse four hours furrowing; one man and a boy one and a half days planting; one man and a boy five hours cultivating; hoeing the first time, four days; one man and a boy cultivating the second time, four and a half hours; hoeing the second time, two days work; cutting and binding stalks, about four days work; harvesting the same, about six days work.

Nov. 12th, shelled two bushels of ears, and found the yield to be one bushel and one peck.

Byfield, Nov. 15, 1850.

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## ON ROOT CROPS.

The committee have endeavored, as far as in their power, to awaken attention to this subject, and to induce cultivators to bring forward the results of their labors. In some instances they have obtained these results, as a voluntary offering, in others they have presumed to intrude, in the hope of DIGGING UP SOME ROOTS, worthy of preservation. They had hoped to have obtained accounts of the culture of each of the crops of this kind commonly cultivated in this vicinity, but in regard to some they have been disappointed. To begin with that, which has herefofore been noticed by them more distinctly than any other—the ONION—they have several statements, drawn with much care, and which will be appended hereto,

condensing the facts necessary to guide in this cultivation. The committee saw the crops mentioned in these statements in the field, as well as those of many other cultivators, and have entire confidence that the facts stated in relation thereto, are worthy of entire reliance. The onion crop in this vicinity was never better than the present year—yielding from one and a half to three hundred barrels per acre, of a value not less than one dollar per barrel. When it is taken into view that the land, labor, and expense of this cultivation can be fairly met for one hundred dollars an acre, it must be apparent that labor thus applied is well rewarded. We are aware that some cultivators are inclined to underrate their crops and overrate their labor,—possibly that they may continue to monopolize the benefits. The committee have no such feeling. They know that in some seasons there are blights that cut the crop off entirely, but generally it is otherwise, and they still speak with confidence in favor of this crop.

The largest produce reported to them, was that of Lyman Mason, of Beverly, six hundred and sixty-nine bushels on one hundred and thirty rods of land, or four and three eighths bushels per rod. The next largest produce reported to them, was that of Daniel Buxton, Jr., of Danvers, four hundred and forty-eight bushels on one hundred and five rods of land, or four and two eighths bushels per rod. The next, by Mr. Proctor, of Danvers, four bushels per rod. Mr. King, Mr Bushby, Mr. Griffin, and several others, in Danvers, whose fields they saw, raised about this amount. Taking all things into view, they saw no crop equal to that of Daniel Buxton, Jr., and therefore they award to him the Society's premium, "for the best conducted experiment in the raising of onions," six dollars.

As to the cultivation of the CARROT, the committee have been disappointed in their expectations. They had hoped to have ascertained some facts, tending to settle some questions, on which there appears to be a difference of opinion. Such as, whether or not, the carrot can be advantageously cultivated several years in succession, on the same land? It is said, by the best authority in the county of Worcester, that it has been so cultivated seven years successively, with good crops.

Such has not been the general experience by the cultivators in Essex. In the hope of throwing light on this question, Francis Dodge, of Danvers, who the last year obtained the Society's premium, was requested to plant the same land with carrots. This he did, but they came up so thin, that during the first part of the season he had little hope of a middling crop. But they continued to grow and almost made up in SIZE what was wanting in NUMBERS,—he estimated the produce at twenty-three tons to the acre, and thought if they had come up as he intended they should, his crop would have been as good as he ever raised. This fact is rather against our preconceived notions, but we state it as given, our purpose being to ascertain facts, and not to establish a particular theory.

We accidentally happened to be on the ground of John Stone, Jr., of Marblehead, while he was gathering his carrots, and complained to him that he had not asked the attention of the committee to his crop. He said they came up so badly, that he should be ashamed to speak of them. We saw among them some carrots that were as much as sixteen inches in circumference and twenty-four inches long, and which would weigh six pounds or more. Mr. Stone estimated his crop at twenty tons or upwards to the acre, and he is not the man to overstate.

On Mr. Mason's ground we saw a luxuriant field of carrots, of the produce of which we should have been pleased to have been informed, but as we are not we cannot say more.

On the land of Henry King, of Danvers, we saw a beautiful field of carrots, up well, and enough of them,—but when we inquired the result, we were told a blight came upon them, the leaves turned yellow,—and further our informant said not. The same in substance, was the result of our inquiries of several other cultivators of the carrot crop.

Mr. Ware, of the committee, continues to entertain a favorable opinion of the cultivation of the carrot, as will be seen in the letter annexed.

Not having any statement of the culture of carrots the present season, we have given the above facts that came within our own observation, that some idea may be formed how the carrot grows, comparatively with other crops.

As to BEETS, the attention of the committee has been called to one claim only, that of Benjamin Rogers, of Andover, for Mangel-wurtzel. It was seen only by Mr. Batchelder, of the committee, who was prevented by indisposition from being present at their final meeting. If the crop proves as good as it promised to be, Mr. Rogers will be entitled to the Society's premium. Although the beet is a valuable article for the feed of animals, it does not seem to be very generally cultivated. No field of half an acre together has come within our observation. This fact argues strongly against its good reputation among the farmers. If it is really good, their cattle will bear testimony to its value. Their evidence is worth more than any chemical analysis.

As to TURNIPS, they are fine things to talk about, but with us it is talk, and little else. We have seen several fields of an acre or more, but no one has been kind enough to tell us the yield. Perhaps they have not yet been pulled. Whether they have or not, we cannot say much in their favor. We have supposed they were easily raised, and worth but little, comparatively, when grown. It may be otherwise.

As to the POTATO—the root of roots, by way of emphasis,—the accompaniment of every abode, from the lowest hovel to the highest palace, what shall be said? To expect a claim for cultivation or produce, would be entirely out of the question. So indispensable is this vegetable deemed for the sustenance and comfort of man, that every one still continues more or less of their cultivation, in the hope that their own field may by chance escape the devastating influence. What this is, we are not prepared to say. And although so many solutions and explanations have been put forward, of the cause of the decay or failure of the potato, none has come to our knowledge worthy of confidence.

A communication from Joseph Snelling, Jr., of Methuen, addressed to the chairman of the committee, is appended to this report as worthy of publication. It indicates a good degree of attention to the subject, and may be the means of awakening the attention of others. In this way alone may a remedy be hoped. That some soils are more favorable to the growth of

sound potatos than others, cannot be doubted; and when the chemical constituents that favor such a growth shall be ascertained, possibly combinations of soil may be formed that shall ensure successful culture.

On the grounds of Lyman Mason, near West Beach, in Beverly, the attention of the committee was called to a field of CABBAGES, containing about one and a half acres, the handsomest they ever saw. It was level land, a loamy soil, had been in grass, ploughed the eighth of May, about eight inches deep, harrowed, furrowed in rows three and a half feet apart, and manured with a mixture of barn manure and leached ashes, applying four cords to the acre, well mixed, placed in the rows. The seed was planted in hills, about the 20th of June. When grown sufficiently large to hoe, they were thinned to one in a hill, and the vacant hills were supplied by transplanting, so that the growth was uniform throughout the field. When we saw the field, the proprietor challenged us to find a missing plant, or one on which a head would not be perfectly formed. The whole were as near alike as so many peas. From this field seven thousand five hundred and twenty have been sold for sixty cents a dozen; one fourth part of the cabbages are still in the field,—this would make nine thousand on the lot, or six thousand to the acre, which at sixty cents per dozen, would make the produce amount to three hundred dollars per acre. These facts are furnished the committee by Mr. Aaron Dodge, who ascertained them by conversation with Mr. Mason. Mr. Mason is one of those cultivators who has very little respect for book knowledge, and consequently is not free to communicate. The committee have so much regard for his culture, as to recommend a gratuity of six dollars, equal to the highest premium for any root crop. Having discoursed so long, like other preachers, we will close by a few practical remarks.

1st. To succeed in Root culture, a full supply of manure must be secured, well mixed, and in good condition to mingle with the soil.

2d. The land must be ploughed deep, and completely pulverized.

3d. Weeds must not be suffered to grow. And although we have seen some fields of large crops, with the weeds over-

topping the plants, by reason of superabundance of moisture and manure, still, as a general thing, where weeds abound other crops will not.

4th. Careful attention is required to obtain good seed, to distribute it at the right time, and in proper position.

5th. Let so many and no more plants remain, as will obtain a perfect growth.

6th. Guard against the approach of all insects, and check their progress at the first onset.

The awards recommended are as follows:

| | |
|---|---|
| To Daniel Buxton, Jr., of Danvers, for onions, - | $6 00 |
| " Lyman Mason, of Beverly, for Cabbages, - - | 6 00 |
| " Benjamin Rogers, of Andover, for Mangel wurtzel, | 6 00 |

For the Committee.* J. W. PROCTOR, CHAIRMAN.

Salem, Nov. 15, 1850.

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DANIEL BUXTON, JR.'S STATEMENT.

The piece of land, planted with onions, to which I asked your attention, contains one hundred and five poles, and has produced, the present season, four hundred and forty-eight bushels fit for the market; being about four and a quarter bushels, or nearly two barrels to the square rod. The onions were not large, but were remarkable for uniformity of size, and excellence of quality. They were of the species called SILVER SKIN. They were thick and plump, which form has been produced by careful attention, in selecting such for seed for several years. I raise my own seed, and am particular to set such only for this purpose, as I wish to raise. In this way, I find their form can be modified nearly as I prefer it to be.

The land on which they grew, is part of a field of 13 acres, on Collins' plain, in Danvers, a light soil, free of stone. For ten years it has been under good cultivation, and freely manured;—most of the time this parcel has yielded onions. BARN

* Messrs B. P. Ware, of Marblehead, William Batchelder, of Andover, and J. M. Ives, of Salem, were associated in making this report.

MANURE, COMPOST, ASHES and MUSCLE-BED, have been the principal applications. Ordinarily, when I plant onions, I apply five or six cords of manure to the acre. In 1849, finding the crop to fail on this field, yielding short of three hundred bushels to the acre, I thought it needed some other nutriment, and as soon as the crop was gathered, I sowed it with oats, using a cultivator to cover them. These grew luxuriantly, and late in the fall, just as the ground was about to freeze, I turned them under, using a side-hill plough,* and running the furrows about eight inches deep. The entire crop was buried by the furrow, and so laid until spring; on examining it then, I found the oats as sound as when turned in, consequently I could not plough the land without disturbing the straw. I went over it several times with a cultivator, and then applied a moderate dressing of manure from my hog yard to the surface, say about two and a half cords to the lot, and mingled it with the soil as well as I could, taking care to remove all obstructions to the even distribution of the seed, and then planted with a machine in the usual way. It came up evenly, and grew well through the season, being kept entirely clear of weeds. The appearance of the plants through the season was uncommonly good, manifestly deriving much aid and support from the decaying green crop underneath. This is proved by another piece of onions in the same field, cultivated and manured in the usual way, where the crop was not more than two thirds as large as this. I am the more particular in describing this experiment with the oats, because it has succeeded beyond my expectations. I have seen other fields of onions the present season, where they grew to a larger size than these, and have no doubt mine would have been larger, if I had put on more manure,

* Within a few years, the use of the *side-hill plough* has come into much favor, among the gardeners in this neighboroood. It is thought to possess many advantages; among these, are the following:

1. It leaves the land free of *ridges* and *dead furrows;* incident to the use of the common plough. 2. It saves travel, at the end of the furrows. 3. It leaves the land true and even at the ends of the furrows, both as they *set in* and *come out.* 4. It requires less draft, as it keeps clean and bright; and leaves the land in better condition for cultivation. 5. So much do I esteem these ploughs that I would sooner pay *fifty dollars* for one for my use, than take a common plough for nothing.

but as a whole, I have not seen any crop that I should prefer. They sell at the present time for one dollar and twenty-five cents per barrel, delivered in Boston. I have so long been accustomed to keep my land clear of weeds, that the labor of taking care of onions is not more than twice as much as is required for Indian corn. I had no thought of offering this crop for your examination, until invited by the Chairman of your committee so to do. If this plain statement of facts shall be thought worthy of your notice, I shall be gratified to have thus contributed my mite in the way of improvements.

Danvers, Oct. 21, 1850.

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ABRAHAM C. OSBORN'S STATEMENT.

As much has been said and written on the onion crop, and premiums and gratuities have been freely awarded by the Essex Agricultural Society, for the most successful experiment in the cultivation of it, I propose to lay before you the results of my labor and success in the production of this crop.

It will be necessary, in the first place, to present in minute details, as near as can be ascertained, a statement of the expenditures incurred for manure, for labor in preparing the land, sowing the seed,—for cultivating, harvesting, and marketing the crop. To the above may be added the rent of the land per acre, or in other words, the interest of the actual worth of the land per acre.

I will commence my statement of expenses, by setting down the rent of land per acre at fifteen dollars, which sum is no more than the interest of what an acre of land is worth, which is capable of producing a good crop of onions. Then comes the expense for manure. Manure that is best adapted to produce a good crop, cannot be purchased short of four dollars and a half per cord, and it requires no less than six cords per acre, making the sum of twenty-seven dollars for the dressing, exclusive of hauling it upon the land, which is worth one dollar and a half per cord, thus making a total of thirty-six dollars in

that department of expense. To prepare the land, and sow an acre, and the seed for the same, is worth ten dollars. It requires, to cultivate an acre of onions properly, the labor of one man thirty-six days, including marketing, at an expense of fifty-nine dollars, thus closing the list of expenditures, which may be drawn up in a statement, after the following manner:

| | |
|---|---|
| For land rent, per acre, | $15 00 |
| " manure and drawing, | 36 00 |
| " preparing the land, &c., | 10 00 |
| " hoeing and weeding the first time, | 10 00 |
| " hoeing and weeding the second time, | 10 00 |
| " hoeing two days, | 2 50 |
| " pulling an acre, | 2 50 |
| " harvesting an acre, | 3 75 |
| " picking over four hundred bushels, | 6 25 |
| " carrying to Boston eight loads, | 24 00 |
| Making a total of expenditures, | $120 00 |

The most pleasant part of my task consists in recording the profits of the crop. I have never as yet been able to raise on an average, one year with another, more than four hundred bushels of onions to the acre. Such has been the result of my labor the past season. The profits accruing from an acre of onions, at four hundred bushels per acre, and at an average price of forty cents per bushel, is forty dollars. It has been the practice among cultivators of onions to spread on their manure, of whatever kind it may be, and plough it in, in the spring, to a depth scarcely sufficient to cover the dressing; year after year have they kept on in the old beaten track of shoal ploughing, thus rendering the soil below the depth of four or five inches, hard and unyielding, the result of which has been a great suffering of the crop, in a very dry time. It is evident that a piece of land, ploughed to such a depth for a long succession of years, must have a sub-soil which the roots of an onion cannot penetrate, hence the necessity of deeper ploughing. The question then arises, when shall this deep ploughing be performed? Shall it be done in the spring, or in the fall? It is obvious that if the dressing is turned in deep in

the spring, it will be a long while before the plants will receive the invigorating effects of the manure, which it requires to bring forth the crop in full strength to an early maturity. Shall we spread the manure, and plough it in deep in the fall? Shall we abandon our former method, and enter upon a new era in the cultivation of the onion?

For the sake of experiment, in the fall of 1849 I spread the manure upon an acre and a half of old onion land, as soon as convenient after the crop was harvested, at the rate of six cords per acre, and turned it in with a large plough drawn by a pair of horses, as deep as if I had been turning over green sward. There it lay pulverizing, through the winter; in the spring I took a cultivator, and went over the land once each way. As I was doing this I could see the fine particles of manure mixing with the soil most admirably. I dispensed with the use of the iron tooth harrow, bushed the land twice, raked, and sowed it. The seed germinated, came forth, and grew with a vigorous growth. When I came to hoe and weed, I found a great difference, compared with previous years. No hard lumps of dirt or manure were found, to injure the fingers of the operator; it was much easier to accomplish the same amount of labor as in previous years, under the old method of preparing the land. The roots of the plants penetrated to a depth heretofore rendered impossible by the hardness of the sub soil.

As the season has been unusually wet, I am unable to state how the crop would have endured a drought. I think it must be evident to the minds of all reasonable persons, that extremely dry weather would not have had so injurious an effect, as if the land had been ploughed shoal in the spring, with the manure partially covered. The result of my experiment has proved so favorable, that I shall make another trial, and test the utility of the practice another season. I shall plough in seven cords of good stable manure to the acre, it being an addition of one cord per acre.

So well convinced am I of the feasibility of ploughing in manure in the fall, for onions, that I should not hesitate for a moment to recommend it to all onion growers. I therefore offer for your consideration the foregoing statement, as the re-

sult of my experiment, and the crop of six hundred bushels of onions, raised upon an acre and a half of land.

Danvers, Oct. 18, 1850.

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BENJAMIN P. WARE'S LETTER.

Agreeably to request, I have noted down a few remarks suggested by my experience in the cultivation and consumption of the various root crops. The carrot crop I consider of the most value and importance to the farmer for the sustenance of his miscellaneous stock, as it can be raised with as little labor and expense as any other, yielding a larger amount, with more certainty, of food for stock than any other root with which I am acquainted, and of a quality unsurpassed. I have practised feeding carrots to milch cows, beef cattle, working oxen, horses, hogs, and fowls,—I find them valuable for all. I think one peck, or one and a half pecks, a sufficient quantity for one feed for neat stock or horses. I usually boil them and scald in meal, for hogs and fowls. I find that my stock appear in much better condition in the spring, and my hay and contents of the granary find great relief from the liberal use of this root; but in extolling the merits of the carrot, I would not forget the virtues of other valuable roots.

Mangel Wurtzel I consider of great practical importance to the farmer, but as the crop is not so certain, and as it leaves the land in much worse condition for future crops, while carrots leave the land in excellent condition, I give the latter the preference.

The Ruta Baga is a very valuable crop, not only for stock, but for the market as a vegetable. Its importance consists partially in the quickness of its growth, as it may be sown after other early crops are taken of, or in case of the failure of other crops; the seed may be sown as late as the 25th of July with good success, but this crop has the same objection as the Mangel Wurtzel, in regard to its injury to succeeding crops.

The flat Turnip is very easily raised, attended with little

expense, and is of comparatively little value for stock, although I think it better to raise them than no roots at all.

With me the cultivation of the Parsnip has been attended with considerable uncertainty and expense, proving unprofitable either for the market or stock, although a delicious vegetable for the table.

The Onion crop I have found to be about as profitable and safe for the farmer to invest in as any. Notwithstanding the blights, and attacks of lice and cut worms to which it is liable, we generally have a crop that repays for the labor bestowed upon it.

Marblehead, Nov. 13, 1850.

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BENJAMIN ROGERS'S STATEMENT.

I offer for premium a crop of Mangel Wurtzel, raised on one hundred and twenty-three rods of land, the product being three hundred and sixty baskets, weighing twenty-two thousand three hundred and twenty pounds, or at the rate of twenty-seven thousand nine hundred pounds per acre.

The soil is a light sandy loam, and is called by most persons very poor land, not worth cultivating. A crop of white beans was taken from the land last year, amounting to five bushels. The manure applied was three bushels plaster of Paris. This year it had eleven cords of compost, one third part barn manure and two thirds sand dug from the barn yard; all the manure was put into drills. It was ploughed on the 8th of May, and on the 11th and 13th of May the land was furrowed with a plough drawn by a horse, going twice in the same furrow; the manure was put into the furrow, and covered with a plough, making a small ridge; the ridge was then raked so as to make the ground nearly level. The holes for the seeds were made by a wheel containing pegs in its circumference, which penetrated the ground one inch, leaving intervals of four inches. The rows were thirty inches asunder; one capsule was dropped into each hole, and covered with the feet, by treading on each hole.

The quantity of seed sown was three pounds. The cultivator was twice used before the 6th of August, and hoed twice. In the month of July the plants were thinned, and left from eight to sixteen inches apart in the rows. The expense of cultivation was as follows:

| | |
|---|---|
| Interest on land, | $1 20 |
| Ploughing, | 2 00 |
| Harrowing, | 1 50 |
| Eleven cords compost, at three dollars per cord, | 33 00 |
| Furrowing with horse, | 1 50 |
| Carting and spreading compost, | 6 60 |
| Seed, | 1 50 |
| Cultivating with horse, | 3 00 |
| Hoeing, | 7 00 |
| Thinning plants, | 4 50 |
| Digging and carting, | 4 50 |
| Total of Expenses, | $66 30 |
| The value of crop, at six dollars per ton, | $66 86 |
| The value of tops, | 4 00 |
| One half manure on land, | 16 50 |
| Total, | $87 36 |
| Expenses, | 66 30 |
| Net profit,* | $21 06 |

Andover, Nov. 15, 1850.

* This specification came to hand after the premium had been awarded for the experiment in cultivation. As this was the only claim presented for the cultivation of *beets*, the committee were disposed to regard it with favor. On examining it, it appears that the land on which they grew, is of small value and of very poor quality, such as ordinarily produces no crop at all. If he who makes two blades of grass to grow where but one grew before, is to be reckoned a public benefactor, surely he who makes a decent crop to grow where none grew before, cannot be undeserving the Society's premium, although some of his more fortunate neighbors, in the possession of better lands, shall be favored with crops more abundant. The *skill* exhibited in the production, and not the *amount produced*, is what we aim to approve.

JOSEPH SNELLING, JR'S. STATEMENT.

You are undoubtedly aware, that the failure of the potato crop the present season has been a source of disappointment, perhaps not a little discouragement, to farmers in general in the cultivation of this vegetable, throughout the State. As it fell to my lot, the present year, to harvest our little crop of potatoes alone, I thought it would be a good opportunity to make a little inquiry into the nature of the disorder, and try if possible to get at some clue to a remedy. But this was undertaken with a very faint hope of discovering any thing useful or satisfactory. Having but little confidence in theories, unless substantiated by actual experiments, I at first thought it best to say nothing about my investigation to any one, till I could prove by actual experiment, something which might be beneficial; but when I considered, although I might not be able to furnish the requisite knowledge or ability to obtain a good crop, yet perhaps I might furnish a key to it, and thereby assist some of my fellow laborers who are still remaining under the same disadvantages which I have labored under, not knowing where to plant, how to plant, or what to plant, I concluded to commit the results of my investigation to writing, with the hope that I shall be pardoned wherein I am found to be behind the age, either in knowledge or literature.

I do not attribute the cause of the potato disorder to an insect or animacule burrowing in the plant. If it can be demonstrated by optical glasses, that insects inhabit the vines or animacules the rotten potatoes, I contend that they exist there, not as a cause, but as an effect of the disorder. The cause of the disorder I attribute to the want of a certain principle or element in the soil, which is indispensable to the health of the potato plant, and which has in many parts of Massachusetts, as well as in Ireland, become exhausted. I believe that this element exists in natural deposites in many places throughout the State, not far below the surface—perhaps no deeper than the sub soil. Furthermore I am aware that it still exists in the surface soil, perhaps in considerable abundance in some particular places, but unless those who plant know that it exists there,

all their endeavours to obtain a good crop, will be at hap-hazard. If the proprietors of this kind of soil have been raising good potatoes from it, year after year, with the real cause of their having good potatoes staring at them with meridian brightness, and they have not discovered it, perhaps this brightness may have been eclipsed by the brightness of the forth coming dollars, which they were likely to receive for their resplendant crop. But if they have discovered it, and keep it a secret, that they may obtain thereby a yearly income, and enjoy in the lap of nature what others are toiling to obtain by art, it is high time for those who have to depend on art as well as nature for a living, to put in for a share. But I have thought perhaps very few of our farmers, either practical or scientific, have discovered the real cause why some raise good potatoes. My reasons are these—1st. Our practical farmers have not discovered it, because it consists of principles so different from what they have considered indispensable to vegetable life, especially to that of the potato, that they have entirely overlooked it. 2d. Our scientific farmers have not, because they have not gone into the potato field with hoe and basket, and bent down to the work, digging and comparing hill with hill, and examined the soil, the manure, and the potato, in order to ascertain what was deficient, and what was superabundant.

I am inclined to think the disorder has been aggravated by the stimulating effect of stable and barn cellar manure, too highly charged with ammonia for a healthy growth in this plant,—the unnatural stimulus propagating the disorder, and inducing mildew in the premature vines, where the disorder appears to commence. It should be remembered that the potato is a kind of plant which grows BELOW the surface of the ground, having the ground for its element and the air for its sustenance, the vines being nothing more or less than aerial roots, through which it derives its sustenance, in order to make it grow and perfect its mealiness. Hence we see the necessity of healthy, lively vines, and also of proper sustenance below the surface to produce these; for if we cannot have healthy, lively vines, we should not expect good and sound potatoes. I am inclined to believe we should depend more upon the natu-

ral, steady warmth of a genial soil to perfect the vines, than on the stimulating heat of fermenting manure.

Has there as yet been a better method discovered to overcome this disorder, than to plant early, in a warm genial soil? If we admit the production of healthy, lively vines, to be the first and great desideratum, then I think we may also admit the utility of planting early in a warm, genial soil, in order to have the vines cover and shade the ground, if possible, before the drought of summer. But in case the season should be wet, caution against mildew in the vines may be necessary, therefore a proper location for the potato field, appears to demand our consideration. I think it will be acknowledged by every one, that if we plant on a swell, or on a side hill, or in some location where the vines will be exposed to the air, and enjoy freely their natural element, they will be less likely to mildew than when planted in a hollow or on a level; and the superabundant rain will of course run and be disposed of. If we have raised thrifty and productive apple trees, or sound and heavy corn in a certain hollow, does it naturally follow that we can raise tolerable potatoes there?

But a few words respecting the quality or kind of soil best adapted to the nature of the potato, may be thought necessary. The principle or element in the soil, which is indispensable to the health of the potato plant, and to which I have alluded in these remarks, I think I have found to be more abundant in yellow marl, or as some have termed it, yellow dirt. Wherever this may be found, of a bright orange color, in considerable abundance, I think we need not hesitate to plant potatoes; yet this may not always prove infallible, for I am inclined to think its virtue lies in the organic or combustible matter which it appears to be more or less charged with. There is a kind of yellow marl which I would recommend for a compost with stable manure, to put in the hill, as an experiment. It is such as I have seen, of a bright orange color, in the banks by the road side, where a cut has been made for a road through the top of a hill covered with shrub oaks.

Methuen, Nov. 4, 1850.

## ON FARMS.

There have been but two farms entered for premium the present year. The farm of J. F. Winkley, of Amesbury, entered by Appleton Moore, and the farm of Henry Poor, of North Andover; but the last mentioned farm was not entered so soon as the rules of the Society require.

Mr. Winkley's farm is situated near Amesbury Mills, and consists of about thirty-eight acres of plain land, except a few acres considerably elevated, on which the house stands, having a fine prospect, and overlooking the adjacent towns. When the committee visited the farm, on the 22d of June, the crops, especially the corn and potatoes, looked well. When they visited the farm on the 11th of September, the potatoes were mostly dug and carried to market, and the crop said to be light. The corn crop looked well, and Mr. Moore states that one acre produced one hundred and thirty bushels of ears of good corn, which is probably considerable more than an average crop on the whole piece. The crop on the whole was a good one, considering the previous situation of the land.

Mr. Moore is making large quantities of manure, and is also trying various experiments, which, it is hoped, in due time will be made public. This is as it should be. Every farmer should not only avail himself of the experience of others, so far as practicable, but should try experiments for himself, as different kinds of land require different management, and a farmer's experience on his own farm, is usually worth more to himself, than information derived from others. The committee consider Mr. Moore's management, generally, very good, but his slatement is somewhat deficient. They recommend that he receive the sum of fifteen dollars.

Mr. Poor's farm the committee visited but once, which was on the 6th of July. His farm is situated in North Andover; the land is a deep rich soil, rather moist, well adapted to grass, and some of it has prodnced fine crops of corn, wheat, &c. The buildings and fences are in good repair, and his farm generally, shows the marks of good husbandry. His fruit trees and crops generally looked well, but the attention of the com-

mittee was particularly called to a field of winter wheat, which looked finely. They were informed that he had cultivated it for some years with good success, and although in his statement he says it is his favorite crop, yet he has omitted giving any information in regard to the amount of his crop, or the manner of cultivation. The committee consider his statement very deficient, as he has omitted that which is of the greatest importance, viz. the manner of making and applying manure, and the cultivation and amount of his crops. They recommend that he receive the sum of ten dollars.

Having visited Mr. Poor's farm, the attention of the committee was called to the farm of Josiah Crosby, of North Andover. His land, like Mr. Poor's, is a deep rich soil, rather moist, well adapted to the cultivation of hay, which has been almost his sole crop. He has made considerable improvement. Land which a few years since was covered with bushes, now produces a fine crop of English hay. He observed that he had hauled sand three fourths of a mile, and considered it profitable for top dressing. He, as also Mr. Winkley and Mr. Poor, has a cellar under his barn, for the purpose of keeping swine and making manure.

There seems to be a gradual improvement among a large portion of our farmers, but not so much as their interest requires. There is the material on almost every farm, if judiciously applied, to enrich itself; compost of mud should be used on high warm land, and subsoil on low moist land; sand should be used on clay, and clay on sand, thus by changing the soil it increases its fertility. But in most cases, too much land is cultivated. It does not necessarily follow that because a man cultivates a large quantity of land, that he is a good farmer. Neither is he the best farmer, in all cases, that grows the largest crops, for although he may raise a large crop, yet the expense may exceed its value, which is not, (in ordinary cases,) good farming. But he is the best farmer who will raise the greatest crop under the same circumstances, with the least expense.

JOSEPH HOW, CHAIRMAN.

Salem, Nov. 29, 1850.

## APPLETON MOORE'S STATEMENT.

The farm examined by the committee, and which is offered for premium, contains thirty-eight acres, mostly of what is called plain land—either sandy or of a sandy loam, underlaid with gravel. The remainder, (about nine acres,) is a gravelly loam, underlaid with clay pan; the whole, with the exception of about six acres which is too steep for easy cultivation, and which is set with fruit trees, is under cultivation with crops as follows, viz: Corn, sixteen acres; potatoes, eight acres; peas, cabbages, turnips, parsnips, carrots, onions, &c., six acres; and about two acres of corn sown broadcast, for fodder.

The most important feature to which the attention of your committee is called, is the previous condition of the land, the whole of which four years since was a pasture, which rented for the small sum of twelve dollars per annum, and which exhibited the appearance of having once been tilled, with a sufficient return of manure, until it would pay no longer for the cultivation, and was suffered to run to waste, or to very poor pasturage at best. Three years since the greater part of the land was broken up, and the next season, without dressing, planted with beans. One year ago it was planted with corn, potatoes, &c., a part with a very limited proportion of dressing and the other part without any, of the evil tendency of which upon the soil, the committee is well aware.

The past winter preparations were made to make returns to the soil for what had been taken from it, by procuring at great expense night soil and other fertilizers, and composting the same so far as practicable, with meadow muck, of which there is an inexhaustible supply within one fourth of a mile from the barn. These composts, to the amount of about five hundred ox cart loads, were used the past spring upon the land intended for cropping, and although the supply was very limited, it was spread upon the surface and ploughed under to the depth of five to seven inches, believing though the quantity of manure be small that it is better spread and ploughed under, than to be put into the hill, thereby giving the young plants a rapid and thrifty start at first, and then leaving them to starve and

stint on a poor soil as soon as the roots attain a sufficient length to pass the frontier of the hill in which they are planted.

Of the crops the present season, we cannot speak so definitely as we should wish, not having completed the harvesting; but of the potato crop we have nothing to boast, as they were generally of a small size, and upon the whole the crop was a light one, yet very sound, as we had not a bushel of unsound potatoes from the eight acres planted. The corn, considering the season, was fair; it was very sound, though not so well tipped as it is some seasons. From one acre measured, we have taken at the rate of one hundred and thirty bushels of ears, and the corn of a good quality. The crops of peas, cabbages, carrots, &c., are good, though not being harvested, we cannot give the particulars. The corn sown broadcast proved a very cheap feed for stock, besides having the effect of leaving the ground upon which it was sown in a very mellow state for after cultivation, a part of which, together with a portion of the potato ground, has been sown with winter wheat, and which now looks very promising.

Our manner of cultivating corn being somewhat different from that usually practised in this vicinity, I will give you a brief description of. The manure having been ploughed in, as before alluded to, the corn was planted with Batchelder's Corn Planter, in rows three feet apart by two and a half feet in the hill. One man with a horse, and a boy to drive, will readily plant six acres in a day, and leave it in a state for hoeing preferable to that planted in the usual way, as it leaves the ground and hill better adapted to a flat cultivation. After the corn was well up, the horse cultivator was put into it, and with one man to hold and drive, was passed through it once a week until the corn roots had extended to the distance of six or eight inches from the hill, after which a slight passing over with the hoe proved sufficient.

Six men have generally been employed upon the farm, though a large portion of labor has been done otherwise than upon the crops, all of which has been charged separately, leaving the farm accounts for the ploughing, manuring, planting and cultivation of the crops, and the larger part of the harvest-

ing, standing thus: April 1st to November 1st, two hundred and sixty-one dollars, being a fraction over eight dollars per acre for the thirty-two acres tilled, exclusive of board and team expenses.

Of the manure heap I will speak briefly. Early in the season we commenced putting muck under the cattle, and continued in this way until the weather becoming cooler and fearing that evil effects might arise from its continuance, we adopted the following plan: Daily, the manure, both solid and liquid, from twenty head of cattle and horses, is dropped into the barn cellars, and immediately about three times the quantity of meadow muck is wheeled in and thrown upon it, which in a very short space of time becomes thoroughly incorporated with the manure, through the agency of hogs, a sufficient number for the purpose being kept in each cellar. In this way we not only find the manure heap to increase rapidly, but judging from the escape of ammonia while it is being shoveled over, the quality of the same must be good.

To some very interesting experiments in the feeding of hogs, we should like to allude, but cannot, as the results are not sufficiently determined.

Amesbury, Nov. 1, 1850.

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## HENRY POOR'S STATEMENT.

In presenting my farm for premium, I do so with some diffidence, from the fact that I lack knowledge in the proper cultivation of the soil, and the proper uses and application of manures. There is one fact, however, well known to us all, and that is that the manure heap is the only reliable "Bank" on which the farmer rests his hopes. My own small experience teaches me the importance of cultivating just as much land as I can supply liberally with manure; beyond this is a fatal error, which is quite too common among us, in my judgement.

To say there can be no improvement in cultivating the soil, and that new discoveries cannot be made in farming, would be to say that the plough, the hoe, the hay fork, the manure fork,

and all farming implements have not been improved, and are not susceptible of still greater improvement. To my mind, farming, in detail, is co-equal with the improvements of all the implements of husbandry. But I will begin an account of my operations since the year 1844, on the farm which I now own and occupy.

I have built a barn and shed, repaired an old barn, added an L to my house, with cellar under new barn thirty-eight by sixty feet, and solid mortar wall, at a cost of over three thousand dollars. My house cellar I have bricked over, and made it proof against rats; have built a brick cemented cistern, with pipe and pump to draw the water into my sink, with well water into the kitchen. Of covered stone drains I have made fifty-five rods; of faced double wall, on either side of the road, fifty-four rods; of double substantial field wall, forty-eight rods; of single wall, sixty-three rods. I have made seven to eight acres of old heavy pasturing into good mowing fields, and walled the same. Have planted fifty-six choice varieties of pears; two hundred and four of apples; seventy-one of plums; fifteen of cherries; two hundred and eighty-one of peaches; sixty of quinces; and twenty ornamental trees.—Total, seven hundred and seven. Have filled all old trees that were thrifty with scions of pears and apples. In addition, I have put in the smaller fruits, such as raspberries, gooseberries, strawberries, and currants.

My hay crop, this year, was good,—by careful judgement, I cut over forty tons on less than twenty acres of ground. Of wheat, which is my hobby, I could ask nothing better. Of oats and barley, my crop was satisfactory. Indian corn heavy for the season,—land moist. Carrots, small. Sugar beets, satisfactory. Parsnips, small. Potatoes, twenty-five per cent saved. Fruits in abundance, excepting apples, this not being the bearing year with my varieties.

My whole farm consits of seventy-five acres,—say, ten of wood land, thirty of pasturage, and thirty-five of tillage. I am not aware that there is a rod of unproductive land in the farm. My stock consists of fourteen neat cattle, two horses, and twelve hogs, with a full stock of the feathered tribes.

North Andover, Nov. 1850.

## ON VEGETABLES.

The Committee, having in charge the specimens of vegetable productions, report that the exhibition was unusually large and fine, and they recommend that the following gratuities be awarded:

| | | |
|---|---|---|
| A. Nesmith, Beverly, seedling potatoes, | gratuity, | 75 |
| A. Hatch, Saugus, " " | " | 75 |
| Eben H. Taylor, two varieties, | " | 50 |
| W. Poor, Andover, black potatoes, | " | 50 |
| H. Mason, Marblehead, onions, | " | 25 |
| J. W. Treadwell, celery, | " | 25 |
| J. M. Ives, Salem, sweet potatoes, | " | 25 |
| J. Upton, Salem, variety of vegetables, | " | 50 |
| A. A. Edgerton, sweet potatoes, | " | 25 |
| John Clark, millet, | " | 25 |
| H. Mason, Marblehead, marrow squashes, | " | 25 |
| Jesse Estes, Middleton, Mt. Sprout water melon, | " | 25 |
| Jonas Harrington, Danvers, marrow squashes, | " | 50 |
| J. K. Haines, Salem, crook neck squashes, | " | 25 |
| John Alley, 3d., Lynn, Averlene cabbage, | " | 25 |
| John Trow, Hamilton, six squashes, 225 lbs. weight | " | 75 |
| Mrs. S. Lord, Salem, variety of pickles, | " | 50 |
| P. Farmer, crook neck squash, | " | 25 |
| B. D. Hill, Jr., Danvers, snake cucumbers and tomatoes, | gra. | 50 |
| Niles P. Phippen, Texas corn, | gratuity, | 25 |
| M. L. Atkinson, Methuen, corn, | " | 50 |
| Israel Rea, Topsfield, " | " | 50 |
| Moses Pettingill, Topsfield, " | " | 50 |
| Eben M. Taylor, Danvers, " | " | 50 |
| Israel Trask, Beverly, crook neck squash, | " | 50 |
| J. Burpee, Georgetown, broom corn, | " | 50 |
| E. R. Mudge, Lynn, celery, egg plants, and tomatoes, | " | 1 50 |
| John Bradstreet, Danvers, potatoes, | " | 50 |
| Gilbert Conant, Ipswich, Southern corn, | " | 50 |
| M. P. Atwood, squash, mixed variety, | " | 25 |
| N. Woodbury, Valparaiso squash, | " | 25 |
| H. Poor, Andover, white flint wheat, | " | 50 |

| | | |
|---|---|---|
| H. Poor, Andover, red chaff Chili wheat, | gratuity, | 1 50 |
| John L. Clark, Salem, Black Sea wheat, | " | 1 00 |
| W. D. Pickman, two very large squashes, | " | 50 |

HORACE WARE, CHAIRMAN.

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## ON FLOWERS.

According to previous arrangements, this portion of the Exhibition was held in connexion with that of the Essex Institute, and under their direction. A very minute and elaborate report will be prepared by their committee, enumerating the several contributors, the specimens exhibited, &c., which will be printed in the transactions of the Society, thus rendering it only necessary for your committee to report the list of gratuities awarded, which are as follows:

| | | |
|---|---|---|
| F. Putnam, Salem, for bouquets, | | 1 50 |
| James H. Holmes, Salem, for bouquets and cut flowers, | | 1 00 |
| Miss R. S. Ives, Salem, for bouquets, | | 25 |
| Miss Sarah H. Ropes, Salem, for bouquets, | | 25 |
| Miss Caroline A. Morse, Methuen, bouquets, | | 50 |
| George Driver, Salem, for dahlias, | | 50 |
| John W. Downing, Salem, for dahlias, | | 50 |
| Thorp Fisher, " " " | | 50 |
| E. Buswell, " " " | | 37 |
| E. D. Ropes, " " " | | 37 |
| W. D. Pickman, " pot plants and cut flowers, | | 1 00 |
| J. C. Lee, " roses and cut flowers, | | 1 25 |
| F. Putnam, " roses, | | 1 00 |
| Calvin May, " pot plants, | | 50 |
| William Weeks, " asters and stocks, | | 50 |

For the Committeee. H. WHEATLAND.

Salem, Sept. 26, 1850.

# REPORT

OF THE

# HORTICULTURAL EXHIBITION.

*To the President and Members of the Essex Institute:*

The Committee on Horticulture report that the annual exhibition of Fruits, Flowers, and Vegetables, for the year 1850, took place at the Town Hall in Salem, on Wednesday and Thursday, September 25th and 26th, in connexion with that of the Essex Agricultural Society, in conformity with previous arrangements to that effect.

The hall was beautifully decorated, the committee being assisted in this portion of their duties by the refined taste of the ladies who so kindly volunteered their aid on this occasion. The large and elegant evergreen arbor opposite the entrance, formed a very conspicuous object, presenting a great variety of wild flowers tastefully grouped together; and supported by two immense cornucopiæ, pouring forth their abundant treasures—the one, of vegetable productions, and the other of fruits in great variety. Over the centre door was a tablet containing the name of POMONA, surrounded with a rich border of fruits. The eastern door was surmounted with a similar tablet, containing the name of CERES, with a chaste wreathing of grains and grasses; while FLORA occupied a similar position over the western door, decked with a gorgeous array of flowers. Other decorations adorned the windows, and bouquets and vases of flowers in abundance were arranged on the tables, and around the hall.

Among the curiosities that attracted much attention, were pears from the original Endicott pear tree in Danvers, which tradition says was planted in 1630; some fine looking Orange pears, from a tree two hundred and ten years old, on the estate of Capt. William Allen, in Hardy street; also, apples from a tree planted by Peregrine White, the first male child born in New England, on the farm originally settled and subdued by him in Marshfield. The farm is now owned and occupied by his direct descendants, by one of whom, Miss Sybil White, the apples were sent to Dr. Merriam, of Topsfield. These relics of past ages are yet productive, and their fruits of no little curiosity.

The display of Fruit was very fine, especially that of Pears, which, for their variety, beauty, and perfection, may well challenge comparison with any similar exhibition of this season. Two thousand dishes or baskets of fruit were pla-

ced upon the tables, consisting, as will appear from the list, of six hundred and seventy varieties, viz: of Pears, two hundred and ninety with names, eight seedlings, and twenty-nine unknown—total, three hundred and twenty-seven; of Apples, one hundred and fifty-one with names, seven seedlings, and twenty-three unknown—total, one hundred and eighty-one; of Peaches, forty with names, thirty-four seedlings, eight unknown—total, eighty-two; of Plums, nineteen with names, three seedlings, one unknown—total, twenty-three; of Grapes, thirty-three with names, eight native seedlings—total, forty-one; of Quinces, Nectarines, Figs, and Melons, three each; of Oranges, Lemons, European Walnuts, and Cornelian Cherries, one each.

The specimen flowers were arranged on stands which occupied the centre of the hall, and comprised a goodly array of Dahlias, Roses, Asters, &c. The Dahlias were the most prominent in their variety and the gorgeousness of the flowers. A stand from Lawrence, brought in on the second day, contained the finest specimens in the hall. The Rose, which with its hybrid Perpetuals, Noisettes, and Bourbons, is beginning to extend the season of its lovely and fragrant blooms during the autumnal months, was well represented. The Asters, Stocks, and Coxcombs were also conspicuous. A stand of Pansies, and also a stand of Phloxes, Antirrhinum in varieties, Œnothera, Aconitum, Gaillardia, Tradescantia, Trollius, &c., added much to the interest of the exhibition.

A few pot plants were placed on the platform in front of the arbor, consisting of Achimenes, Gloxinias, Fuchsias, &c., whose showy and splendid flowers formed a striking contrast with the native denizens of our fields and meadows, grouped in the rear.

The Vegetables, &c., were arranged in the anterooms. The display, although not large, was very interesting, and consisted of fine specimens of Squashes, Potatoes, Onions, &c. In this department were placed the Cereals—as varieties of Corn, Wheat, &c. The cultivation of the last named grain is said by the gentlemen who exhibited specimens, to have been successful; and it is greatly to be desired that further experiments should be tried by our agriculturists, to test fully the advantage of its more general introduction.

Nineteen towns of our county were represented by the contributions of one hundred and ninety-one individuals, viz: from Salem, one hundred and twenty-three; Danvers, sixteen; Lynn, eleven; Beverly and Topsfield, five each; Middleton and Methuen, four each; Marblehead, Andover, Hamilton, and Ipswich, three each; Wenham, Lawrence, and Saugus, two each; Boxford, Newburyport, Newbury, Haverhill, and Gloucester, one each. Also, two from South Reading, one from Lowell, and one from Kendall, Illinois, which being without the limits of the county, were not included in the above estimate.

A comparison of the present exhibition, with the first of the kind ever held in Salem, shows a very gratifying as well as rapid increase of interest in the cultivation of fruits and flowers. That exhibition was held on Tuesday and Wednesday, September 14th and 15th, 1841. The number of contributors was then seventy-six,—about three hundred plates of Fruit were placed on the tables, comprising one hundred and fifty-three varieties, viz: ninety-four of Pears, twenty-five of Apples, ten of Peaches, eight of Plums, eight of Grapes, four of Melons, two of Quinces, one of Nectarines, and one of Filberts.

May we not justly infer from the above comparison, that the labors of the Institute in maintaining their stated exhibitions have not been in vain; but have resulted in diffusing through the community a more general and extensive taste for horticultural pursuits, thus accomplishing the principal object of their establishment.

Annexed is a list of the contributors, and of the articles by them exhibited.

Respectfully submitted.

JOHN C. LEE, CHAIRMAN.

Salem, Mass. Oct., 1850.

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## FRUIT.

R. MANNING, Pomological Garden, Salem. *Pears*—Bezi de la Motte, Long Green, Lawrence, Fig of Naples, Andrews, Favorite Rousselet, Bartlett, Duchesse d' Orleans, Belle et Bonne, Frederic de Wurtemberg, Eyewood, Columbia, Charles of Austria, Fulton, Golden Beurre of Bilboa, Beurre Bosc, Beurre d' Amanlis, Bezi de Montigny, Comte Lelieur, March Bergamot, Bergamotte d' Automne, Moccas, Monarch, Croft Castle, Harvard, Petre, Hericart, Flemish Beauty, Shobden Court, Beurre Van Marum, Swan's Egg, Ronville, Calebasse Monstreuse, Caen du France, Hunt's Connecticut, Howell, Henkil, Doyenne d' Hiver, Beurre d' Aremberg, Doyenne Goubault, Brown Beurre, Pennsylvania, Figue Extra, Huguenot, Capsheaf, Aston Town, Paradise d' Automne, Cushing, Black Pear of Worcester, Styrian, Jaminette, Wilbur, Gansel's Bergamot, Bishop's Thumb, Urbaniste, Dallas, Rouse Lench, Henrietta, Monsieur le Cure, Flemish Sabine, Dunmore, Serrurier d' Automne, Althorp Crassanne, Anonymous, Bon Chretien Fondante, Coter, Comte de Lamy, Comstock, Spanish Bon Chretien, Clara, Hathorne's Seedling, St. Michaels, Bergamotte Zappee, John Dean, Edwards, Whitfield, Beurre Kenrick, Pomme Poire, Bergamotte Parthenay, Queen Caroline, Hacon's Incomparable, Beurre Goubault, Jubin, King Edward, Plombgastel, Rameau, Monarch (false), Rousselet d' Esperen, Nouveau Poiteau, Brande's St. Germain, Napoleon, Chaumontelle, Henri Van Mons, Calebasse, Citron of Bohemia, Jalousie de Fontenay Vendee, Wendell, Long Green of Autumn, Schoeling Nierry, Delices de Jodoigne, Foster's St. Michaels, Ambrosia, Girardin, Summer Thorn, Capiaumont, Queen of the Low Countries, Nos. 982, 1036, and 1454 of Van Mons. *Apples*—Pound, Green Sweet, Pigeonnette, Minister, Fall Harvey, Pumpkin Sweet, Swaar, Hubbardston Nonsuch, Garden Royal, Lyscom, Rambour d' ete, President, Ribston Pippin, Lemon Pippin, Gravenstein, Gloucester, Porter, Fallawater, Drap d' Or, Maiden's Blush, Golden Noble, Summer Sweet Paradise, Corse's Sweeting, Walpole, Black, Haskell's Sweeting, Roi Saube, King of the Pippins, Triangle, Pomme Arabie, Danvers Winter Sweet, Yellow Bellflower, Pennocks, Edwards' Russet, Hawthornden. *Peaches*—Jacques, Washington, Melacoton, Apricot, Yellow Admirable, Elisabeth, Kenrick's Heath, Grosse Mignonne. *Plums*—Rogers, Downton Imperatrice, one variety unknown.

J. C. LEE, Salem. *Pears*—Calebasse de Nerkmann, Delices de Jodoigne, Beurre Sprin, Beurre Bronze, Soldat Laboureur, Poire Henriette, Poire Du-

vernay, Beurre Gris d' hiver nouveau, Orpheline d' Enghien, Ferdinand de Meester, Beurre Curtel, Poire Serrurier, Doyenne Sieulle, Girando, Poire d Albret, Beurre Montgeron, Beurre Moire, Poire Millot, Beurre Beauchamps, Jalousie de Fontenay Vendee, Bergamotte Le Sible, Belle apres Noel, Beurre d' Elberg, Poire Seigneur, Gansel's Bergamot, Seckel, Washington, Rousselet de Rheims, Bartlett, Heathcot, Bleeker's Meadow, Henri Quatre, Passe Colmar, Bezi de la Motte, Glout Morceau, Buffum, Winter Nelis, Marie Louise, Josephine, Croft Castle, Girardin, Nameless, Long Green, Fulton, Winter Orange, Parkinson's Warden, Poire Sage, Delices d' Hardenpont, Poire de Louvain, Ne Plus Meuris, Belle et Bonne, Colmar d' Aremberg, Beurre Fougere, St. Bernard, Plombgastel, Missile d' hiver, Belle Epine Dumas, Flemish Beauty, Duchesse d' Angouleme, Eyewood, Brougham, Lodge, Cross, Beurre Spence, Tyson, Henkil, Comte de Lamy, No. 56 Van Mons, Las Canas, Lawrence, Aston Town, Louise Bonne de Jersey, Beurre de Beaumont, Wilbur, Belle Lucrative, Beurre Diel, Calebasse Vaste, Beurre Bosc. *Apples*,—Baldwin, Danvers Winter Sweet, Rhode Island Greening, Pickman Pippin, Jonathan, Spice, Ortley Pippin, Peck's Pleasant, Fall Flat, Lyscom, Glory of the West. *Peaches*,—Morris' Red Rare Ripe, Cooledge's Favorite, Bonaparte, Crawford's Early. *Grapes*,—Black Hamburg, White Chasselas, Variegated Chasselas, Grove End Sweetwater, Flame Colored Tokay, Black Tripoli, Black St. Peters, Scotch White Cluster.

JOHN M. IVES, Salem. *Pears*,—Golden Beurre of Bilboa, Bartlett, Cushing, Monsieur le Cure, Paradise d' Automne, Beurre Diel, Leon le Clerc, Columbia, Long Green, Fulton, Flemish Beauty, Beurre d' Aremberg, Hacon's Incomparable, Easter Beurre, Duchesse d' Angouleme, Bezi de la Motte, Belle Lucrative, Andrews, Pitt's Prolific, Bon Chretien Fondante, Jalousie, Knight's Monarch, Dunmore, Beurre Bosc, Thompson. *Apples*—Hubbardston Nonsuch, Aunt Hannah, Minister, Boxford, Deacon (?), Pickman Pippin, Barker's Spice, Seaver's Sweeting, Transparent, Reinette of Canada, Fall Harvey, Swaar, Mela Carla, Porter, Lyscom, Danvers Winter Sweet, Carthouse. *Peaches*,—Jaques' Yellow Rare Ripe, Crawford's Early, Mellish's Favorite, Snow, Seedling Free-stone, Early Royal George, Hasting's Rareripe, Cutler's Rareripe. *Plums*,—Red Gage, Goliah, Reine Claude Violet, Violet Perdrigon, Sharp's Emperor. *Grapes*,—Isabella. *Figs*,—Turkey. *Quinces*,—Orange. Cornelian Cherry.

CHARLES F. PUTNAM, Salem. *Pears*,—Doyenne Boussock, Beurre d' Amanlis, Smith, Malcommaitre, Rousselet Van Mons, Jean de Witte, Beurre Bronze, Van Mons Leon le Clerc, Belle Heloise, Jalousie, Gendesceiu, Beurre Dore, Monsieur le Cure, Bartlett, Beurre de Beaumont, Doyenne Musque, Comte de Lamy, Doyenne de Kirkman, Fondante Van Mons, Pope's Russet, Bleeker's Meadow, Althorpe Crassanne, Winter Nelis, Julienne, Bezi Sanspareil, Beurre d' Espoelberg, Belle Epine Dumas, Doyenne d' Hiver Nouveau, Long Green of Autumn, Poire Cire, Nouveau Poiteau, Bon Chretien Fondante, Salviati, Caillot Rosat, Wilhelmine, Angelique de Bordeaux, Beurre Bolwiller, Long Green, Marquis d' Hiver, No. 426, Buffum, Rondelet, Bossuck, Beurre Gris d' Hiver Nouveau, Colmar Tardif, Passe Colmar, Bergamotte Cadette, Jalousie de Fontenay Vendee, Forelle, Bonne de Zees, Chau-

montelle Germain, Gerardo, Bernadiston, Mabille, Inconnue Van Mons, Beurre Supreme, Rigoleau, Chaumontelle, Bergamot Bernard, Doyenne Gris, Van Mons (unnumbered), Pitt's Prolific, Louise Bonne de Jersey, Beurre Bosc, Garrous, Beurre de Printemps, Duchesse d' Angouleme, Madotte, Callirosa, Calebasse d' Ete, Easter Beurre, Smith's Pennsylvania, one seedling, and eight varieties unkown. *Apples*,—Minister, Hubbardston Nonsuch, Roxbury Russet, Danvers Winter Sweet, Benoni, Ramsdell's Red Sweet, Scarlet Nonpareil, Fallawater, Tenny, Cathead, Black Baldwin, Swaar, Hamilton, Deux ans, Adams Pearmain, Spitzenberg, Fall Harvey, Sykehouse Russet, Maiden's Blush, Porter, Rambour d' Ete, Rhode Island Grenning, Claygate Pearmain, Reinette d' Hiver, Cockle Pippin, Reinette de Vigan, Lyscom, Reinette Van Mons, Sturmer Pippin, six varieties unknown.

Ephraim Woods, Salem. *Pears*,—Bartlett, Andrews, Bon Chretien Fondante, Belle et Bonne, Beurre Bosc, Belle Lucrative, Bezi de la Motte, Columbia, Catillac, Golden Beurre of Bilboa, Fulton, Lawrence, Long Green, Marie Louise, Petre, Harvard, Queen of the Low Countries. *Apples*,—Nodhead, Baldwin, Fall Harvey, Monstrous Pippin. *Plums*,—Three seedling varieties. Orange Quinces.

George Andrews, Salem. *Pears*,—Louise Bonne de Jersey, Winter Nelis, Bartlett, Rousselet de Rheims, Messire Jean, Seckel, Bezi de la Motte, Monsieur le Cure, Flemish Beauty, St. Michaels, Golden Beurre of Bilboa, Long Green of Autumn, Hacon's Incomparable, Washington, Orange, March, Iron, Chelmsford, Beurre d' Amanlis, one seedling variety. *Apples*,—Monstrous Pippin, Minister, Lady, Baldwin, Pearmain, Porter, Bellflower, two varieties unknown.

Augustus D. Rogers, Salem. *Pears*,—Flemish Beauty, Belle Lucrative, Louise Bonne de Jersey (on quince and on pear), Napoleon, Washington, Cushing, Duchesse d' Angouleme, Urbaniste, Gansel's Bergamot, Wilkinson, Seckel, Andrews, St. Ghislain, Golden Beurre of Bilboa, Passe Colmar, Winter Nelis, Beurre Diel, Dix, Bezi de la Motte, Surpasse Virgalieu, Long Green, Glout Morceau. *Plums*,—Coe's Golden Drop. Orange and Pear Quinces.

Stephen Driver, Salem. *Pears*,—Winter Nelis, Seckel, St. Michaels, Beurre Bosc, Flemish Beauty, Gansel's Bergamot, St. Ghislain, Easter Bergamot, Louise Bonne de Jersey, Althorp Crassanne, Andrews, Bartlett, Lewis, Washington, Marie Louise, Long Green, Heathcot, Urbaniste, Columbia, Messire Jean, Pound, Bleeker's Meadow, Belle Lucrative, and ten varieties without name. *Apples*,—Hubbardston Nonsuch, Porter, Red Pearmain, Golden Russet, and five varieties unknown. *Grapes*,—Black Hamburg, White Hamburg, White Muscat of Alexandria. *Peaches*,—Royal George.

B. H. Silsbee, Salem. *Pears*,—Bartlett, Harvard, Louise Bonne de Jersey, Seckel, Marie Louise, Urbaniste, Messire Jean, Bishop's Thumb, Bleeker's Meadow, Monsieur le Cure, Swan's Orange, Flemish Beauty, Paradise d' Automne, Passe Colmar, Glout Morceau, Easter Beurre.

J. H. Phippen, Salem. *Pears*,—Bartlett, Belle Lucrative, Beurre d' Amanlis, Lewis, Raymond, Louise Bonne de Jersey, Golden Beurre of Bilboa, Washington, Beurre Diel, Ducchesse d' Angouleme, Beurre d' Aremberg, Columbia. *Peaches*,—Early Crawford, Pourpree Hative.

GEO. D. PHIPPEN, Salem. *Pears*,—Bartlett, Beurre d' Amanlis, Louise Bonne de Jersey, Beurre Diel.

W. D. PICKMAN, Salem. *Pears*,—Long Green, Brown Beurre, Belle Lucrative, Lewis, Washington, Bartlett, Andrews, Dix, Harvard, Duchesse d' Angouleme, Louise Bonne de Jersey, Urbaniste, Gansel's Bergamot, Seckel, Flemish Beauty, Golden Beurre of Bilboa, Beurre Diel, two varieties unknown. *Plums*,—Coe's Golden Drop.

N. B. MANSFIELD, Salem. *Pears*,—Beurre Bosc, Henri Quatre, Winter Nelis, Brown Beurre, Beurre d' Aremberg, Urbaniste, Capiaumont, Beurre d' Amanlis, Louise Bonne de Jersey, Surpasse Virgalieu, Bartlett, Wilkinson, Gansel's Bergamot, Beurre d' Angleterre, Cushing, Bon Chretien Fondante, Moccas, Seckel, Washington, Josephine, Golden Beurre of Bilboa, Heathcot, Flemish Beauty, Glout Morceau, Harvard, Fulton, Messire Jean, Wilkinson, Rousselet de Rheims, Belle et Bonne, Paradise d' Automne. *Apples*,—Danvers Winter Sweet, Tolman's Sweeting, Belle et Bonne, Osgood's Favorite, Red Calville, Minister, Leavitt, Marquis, Drap d' Or, Kentish Full Basket, Ortley Pippin, Porter, Alexander. *Seedling Peach*,—Old Zack. *Plums*,—Wilkinson.

H. F. KING, Salem. *Pears*,—Colmar d' Aremberg, Groom's Princess Royal, Louise Bonne de Jersey, Beurre Diel, Duchesse d' Orleans, Van Mons Leon le Clerc, Paradise d' Automne, Jalousie de Fontenay Vendee, Dunmore, Moccas, Passe Colmar.

HENRY WHEATLAND, Salem. *Pears*,—Bartlett, Seckel, Gansel's Bergamot, Urbaniste, Napoleon, Beurre Diel, Passe Colmar, Monsieur le Cure, Chaumontelle, Pound, Winter Nelis, two varieties unknown.

WM. F. GARDNER, Salem. *Pears*,—St. Ghislain, Golden Beurre of Bilboa, Swan's Orange. *Apples*,—Porter. *Peaches*,—Snow.

GEO. C. S. CHOATE, Salem. Bartlett Pears. *Apples*,—unknown.

MISS E. FABENS, Salem. Kilham Hill Apples.

MERCY UPTON, Salem. Orange Pears.

M. A. STICKNEY, Salem, Seedling Peaches.

JOS. S. CABOT, Salem. *Pears*,—Belle Cratenaise, Belle Excellente, Beurre Bronze, Celestin, Josephine de Malines, Wredaw, Bergamot libitent verte, Doyenne Goubault, Poire His, Beurre d' Amanlis, Winter Nelis, Catillac, Vesouziere, Belle d' Esquermes, Notaire Minot, Dundas, Dunmore, Waterloo, Althorp Crassanne, Golden Beurre of Bilboa, Hericart, Washington, Quillette, Doyenne Boussock Nouvelle, Nouveau Poiteau, Lawrence; Van Buren, Dallas, and Calhoun *of Gov. Edwards:* Fig Extra Van Mons, Smith's Pennsylvania, Iron Pear of Worcester, Messire Jean, St. Ghislain, Jalousie de Fontenay Vendee, Jalousie, Gansel's Bergamot, Autumn Bergamot, Welbeck's Bergamot, Capiaumont, Surpasse Virgalieu, Cabot's Seedling, Paradise d' Automne, Urbaniste, Marie Louise, Marie Louise Nova, Beurre de Beaumont, Verte Longue d' Automne, Long Green, Green Sugar, Mons. Le Cure, Louise Bonne de Jersey, Doyenne d' hiver, Enfant prodige, Capucin Van Mons, Thompson, Bon Chretien fondante, Bezi de la Motte, Passe Colmar, Chartreuse, Paquency, Truickhill's Bergamot, Brande's St. Germain, Colomb's Winter, Andrews, Comte de Lamy, Boucquia, Great Citron of Bohemia, St. Andre,

Fondante d' Automne, Fulton, Hessel, Henri Quatre, Beurre Diel, Alpha, Bartlett, Muscadine, Green Pear of Yair, Wilkinson, Columbia, Capsheaf, Beurre d' Aremberg, Croft Castle, Lewis, Cross, Gendesceim.

J. Fisk Allen, Salem. *Grapes*,—August Muscat, Josling's St. Albans, Whortley Hall Seedling, White Frontignan, Wilmot's Black Hamburg No. 16, Royal Muscadine, Wilmot's New Black Hamburg, White Gascoigne, White Nice, Black St. Peters, Chasselas de Fontainbleau, Black Hamburg, Bishop, Red Chasselas, Rose Chasselas, Golden Chasselas, Chasselas de Bar sur Aube, De Candolle, Black Prince, Red Traminer, Grizzly Frontignan, Isabella (under glass.) *Pears*,—Coffin's Virgalieu, Belle Lucrative, Bartlett, Flemish Beauty, Beurre Bosc, Gansel's Bergamot, Beurre Diel, Seckel, Marie Louise, Urbaniste. *Lemons*. *Figs*,—Black Brunswick. *Nectarines*,—Golden.

Ephraim Emmerton, Salem. *Pears*,—Monsieur le Cure, Bartlett, Frederic de Wurtemberg, Flemish Beauty, Duchesse d' Angouleme, Glout Morceau, Swan's Orange, Louise Bonne de Jersey, Beurre d' Amanlis, Passe Colmar, Beurre Diel, Beurre d' Aremberg, Urbaniste, Marie Louise, Belle Lucrative, Golden Beurre of Bilboa, Easter Beurre, Bishop's Thumb, Long Green, Muscadine, Rousselet de Meester, Capiaumont, Gansel's Bergamot, Figue de Naples, Pitt's Prolific, Prince's St. Germain, St. Michaels, Capsheaf, Princess of Orange, Beurre de Beaumont, Surpasse Virgalieu, Henri Quatre, Washington, Seckel, Las Canas, Winter Nelis, Beurre d' Angleterre, St. Ghislain, Julienne, Dearborn's Seedling; and a basket containing labeled specimens of forty varieties of pears.

James Upton, Salem. *Pears*,—Bartlett, Washington, Seckel, Jean de Witte, Passe Colmar, St. Ghislain, Plombgastel, Petre, Quilletette, Doyenne Louis, Chaumontelle, Beurre Rance, Bonne de Zees, Bon Chretien Fondante, Beurre de Beaumont, Vicomte de Spoelberch, Winter Nelis, Summer Thorn, St. Andre, Raymond, Long Green, Lewis, Henri Quatre, Andrews, Ferdinand de Meester, Duchesse d' Orleans, Comperette, Catillac, Brande's St. Germain, Beurre d' Anjou, Beurre d' Amanlis, Beurre Diel, Belle Lucrative, St. Michaels, Messire Jean, Urbaniste, Duchesse de Mars, Easter Beurre, Frederic de Wurtemburg. *Grapes*,—Black Hamburg, White Chasselas, Red Chasselas, White Frontignan.

John Bertram, Salem. *Pears*,—Capiaumont, Frederic de Wurtemberg, Flemish Beauty, King Edward, Dunmore, Winter Nelis, Belle Lucrative, Knight's Monarch, Marie Louise, Colmar d' Aremberg, Doyenne Musque, Louise Bonne de Jersey. *Grapes*,—Zinfindal, Black Hamburg, White Chasselas, Red Chasselas. *Peaches*,—Early Crawford, and two varieties unknown.

David Roberts, Salem. *Pears*,—Bartlett, Beurre Bosc, Paradise d' Automne, Winter Nelis, Comte de Lamy, Louise Bonne de Jersey, Passe Colmar, Lawrence, Seckel, St. Ghislain, Fulton, Thompson, Capiaumont, Chaumontelle (?), Marie Louise, Golden Beurre of Bilboa, Moccas, Van Mons Leon le Clerc, Surpasse Virgalieu, Easter Beurre, Las Canas, Flemish Beauty, Gansel's Bergamot, Urbaniste, Capsheaf, Dunmore.

Oliver Thayer, Salem. *Pears*,—Belle et Bonne, Bonne de Zees, Wilkinson, Monsieur le Cure, Belle Lucrative, Gansel's Bergamot. *Apples*,—Golden Russet, Hubbardston Nonsuch.

N. WESTON, Salem. *Pears*,—Flemish Beauty, Pound, Catillac.

W. G. LAKE, Topsfield. *Pears*,—Fulton, Dearborn's Seedling, Bartlett, St. Michaels, Flemish Beauty, Winter Nelis, Cushing, Long Green, Frederic de Wurtemberg, Belle Lucrative, Golden Beurre of Bilboa, Napoleon, Andrews, Louise Bonne de Jersey, St. Ghislain, Harvard, Dunmore, Glout Morceau, Beurre Diel, Duchesse d' Angouleme, Seckel, Easter Beurre, Monsieur Le Cure, Buffum, Dix, Catillac, Beurre d' Amanlis, and five seedling varieties. *Apples*,—Perkins' Sweet, Minister, Danvers Winter Sweet, Golden Russet, Baking Sweet, York Greening, Cart House, Spitzenberg, Red Eagle, Striped Sweet, Kilham Hill, Jenny Lind (seedling), Fall Harvey, York Russet, Baldwin, Alexander, Winter Green, Yellow Bellflower, Porter, Rhode Island Greening, Russet Pearmain, Roxbury Russet, Hubbardston Nonsuch, Aunt Hannah, White Bellflower, Ribston Pippin, Golden Queen, Gilliflower, Jenkins' Sweet, Jennett Red, Pippin, Autumn Red, and six seedling varieties. *Peaches*,—Jaques, Walter's Early, Manning's Red, Yellow Alberge, Napoleon, Crawford's Early, Jenks' Red, and five seedling varieties. *Plums*,—Green Gage, Prince's Imperial, Blue Imperatrice, Orleans. *Grapes*,—Three varieties cultivated native. Orange Quinces.

MOSES PETTENGILL, Topsfield. *Pears*,—Beurre Diel, Beurre Bosc, Urbaniste, Orange, Winter St. Germain, Wilkinson, Golden Beurre of Bilboa, Pope's Russet, Wilbur, Bartlett, Harvard, Winter Nelis, Bezi de la Motte, Seckel, Passe Colmar, Marie Louise, Pound, Gansel's Bergamot, Dearborn's Seedling, St. Ghislain, Napoleon, Cushing, Beurre Bronze. *Apples*,—Blue Pearmain, Russet Pearmain, Golden Pearmain, Porter, Honey Pink, White Queening, Red Queening, Pettengill Pippin, Warner, Rhode Island Greening, Baldwin, Sopsavine, Aunt Hannah, Danvers Winter Sweet, Hubbardston Nonsuch, Kilham Hill, Roxbury Russet, Baking Sweet, Putnam Harvey, High top Sweeting, Ribston Pippin, Cathead, Lime, Newbury Blush, Perkins' Long, Dutch Codlin, Andrews, Golden Russet, Lenox Red Winter, one seedling variety. *Peaches*,—Seventeen seedling varieties, Jenny Lind (seedling), Jenks' Rareripe, Crawford's Early, Late Admirable, Lee's Rareripe, Prince's Rareripe, Yellow Rareripe, Jenks' Red Rareripe, Grosse Mignonne, Morris' White, Sprague's Rareripe, President, Red Freestone, Malta. *Quinces*,—Orange, and Portugal.

ANDREW LACKEY, Marblehead. *Pears*,—Belle Lucrative, St. Ghislain, Urbaniste, Delices de Jodoigne, Belle et Bonne, Frederic de Wurtemburg, Hessel, Boucquia, Henri Quatre, Van Mons Leon le Clerc, Andrews, Dunmore, Golden Beurre of Bilboa, Dearborn's Seedling, Bon Chretien Fondante, Great Citron of Bohemia, Napoleon, Capiaumont, Surpasse Marie, Comte de Lamy, Knight's Monarch, Bleeker's Meadow, Althorp Crassanne, Bartlett, Swan's Egg, Long Green, Beurre d' Amanlis, Passe Colmar. *Apples*,—Ribston Pippin, Bourdin Noir, Aunt Hannah, Pierce, Yellow Bellflower, Benoni, Porter, Canadian, Reinette, Reinette Triomphante. *Plums*,—Italian Prune, Downton Imperatrice, Corse's Field Marshal, St. Catharine's, Frost Gage, German Prune.

JAMES EUSTIS, South Reading. *Apples*,—Baldwin, Minister, Ben, Trunnel, Columbian Pippin, Maiden's Blush, York Russet, Summer Sweet Para-

dise, Danvers Winter Sweet, Kilham Hill, Dutch Codlin, Jewett's Red, Winter Green, Porter, Fall Harvey, Canada Red, Hubbardston Nonsuch, Golden Ball, Roxbury Russet, Winter Russet, Spice, Boxford, Rhode Island Greening, and three varieties unknown.

E. A. MUDGE, Lynn. *Pears*,—Louise Bonne de Jersey, Passe Colmar, Beurre Diel, Duchesse d' Angouleme, Long Green of Autumn, Belle et Bonne. *Grapes*,—Black Hamburg, Grizzly Frontignan, Sweetwater.

E. BROWN, Lynn. *Pears*,—Summer Thorn, Pitt's Prolific, Seckel, Iron, Pound, McLaughlin, Winter Nelis, Bleeker's Meadow, Fulton, Harvard, Surpasse Virgalieu, Long Green, Frederic de Wurtemburg, Bergamot, Columbia, Beurre d' Aremberg, Flemish Beauty, and a large basket of various kinds. *Apples*,—Minister, Gravenstein, Rhode Island Greening, Red Astrachan, York Russet, Baldwin, Hubbardston Nonsuch, Porter, Mexico, Blue Pearmain, Swaar, Seaver's Sweet, one variety unknown, and a large basket of various specimens, handsomely arranged.

S. C. PITMAN, Lynn. *Pears*,—Bartlett, Julienne, Orange, Belle de Bruxelles, Brown Beurre, Seckel, Doyenne Gris, Jalousie de Fontenay Vendee, Bon Chretien Turc, Louise Bonne de Jersey, Duc de Bordeaux, Chaumontelle, and five varieties unknown. *Apples*,—Baldwin, Danvers Winter Sweet, Kilham Hill, Fall Harvey, one variety unknown.

MARK HEALEY, Lynn. Specimens of forty-six varieties of Pears, without names.

HENRY M. BARKER, Salem. *Pears*,—Flemish Beauty, Dearborn's Seedling, Johonnot (?), St. Ghislain.

J. G. TREADWELL, Salem. *Pears*,—Buffum, St. Ghislain, Seckel. Minister Apples.

THOS. DOWNING, Salem. *Pears*,—Louise Bonne de Jersey, Passe Colmar.

J. H. NICHOLS, Salem. *Pears*,—Capiaumont, Louise Bonne de Jersey, Marie Louise, Messire Jean, Flemish Beauty, Quilletette (?), Cabot, Duchesse d' Angouleme, Brown Beurre, Gansel's Bergamot, Beurre Diel. Gloria Mundi Apples.

GEO. NICHOLS, Salem. *Pears*,—Dix, Bartlett, Passe Colmar.

MRS. GEO. D. CLARK, Salem. Peaches, and Harvard Pears.

WM. WEBB, Salem. Orange Pears.

JOS. BROWN, Jr., Lynn. Bartlett Pears.

JAMES ARRINGTON, Salem. *Pears*,—Washington, Golden Beurre of Bilboa, Long Green, St. Ghislain, Marie Louise, Belle Lucrative, Urbaniste, Bartlett, Andrews, Seckel, Paradise d' Automne.

MRS. THOS. D. BRACE, Salem. Peaches.

BENJA. SHAW, Lynn. Monsieur le Cure and Bartlett Pears.

A. THORNDIKE, Salem. Passe Colmar Pears. Orange Pear Quinces.

CALEB WARNER, Salem. Bartlett Pears.

J. SHED, Danvers. *Apples*,—Shed's Seedling.

BENJA. SYMONDS, Danvers. *Pears*,—Hacon's Incomparable, Marie Louise, Long Green. *Apples*,—Williams' Favorite. *Peaches*,—Early Crawford, and two seedling varieties. *Grapes*,—Sugar. *Plums*,—Blue Imperatrice.

EBEN. M. TAYLOR, Danvers. Comte de Lamy Pears. Native Grapes. *Peaches*,—Early Crawford, and four varieties of seedlings.

DAVID BAKER, Andover. Bartlett Pears. *Apples*,—Cathead, Baldwin, Fall Pearmain.

JOHN HOVEY, Salem. Gage Tomatoes.

A. G. BRADSTREET. *Peaches*,—Jenks' Rareripe, Malta, Early Crawford.

JARVIS LAMSON, Hamilton. Detroit Apple (supposed).

WM. STEARNS, Salem. *Pears*,—Endicott, St. Ghislain, Gansel's Bergamot, Summer Thorn, Orange, Louise Bonne de Jersey, Wilkinson, Belle Lucrative, Seckel, Ronville, March, Chaumontelle, Platt's Bergamot, Long Green, Bartlett, Flemish Beauty, Long Green of Autumn, Harvard, Rousselet de Rheims, Chelmsford, Urbaniste, Beurre Bosc, Bishop's Thumb, Golden Beurre of Bilboa, Winter Nelis, Brown Beurre, St. Michael, Summer Francreal, Surpasse Virgalieu, St. Germain, and two varieties unknown. *Apples*,—Jarvis Winter, Monstrous Pippin. Orange Quinces.

WM. B. PARKER, Salem. Frederic de Wurtemburg Pears.

RICHARD S. ROGERS, Salem. Peaches, unknown.

P. WAIT, North Danvers. Minister, and Kilham Hill Apples.

A. NICHOLS, Danvers. Fall Harvey Apples.

BENJAMIN PORTER, Danvers. Endicott Pears from the original tree. Endicott Apples.

R. A. MERRIAM, Topsfield. Apples from Miss Sybil White of Marshfield, from a tree planted by Peregrine White.

EDWARD A. SAUNDERS, Salem. Orange Pears from a tree two hundred and ten years old, in Hardy street.

A. L. PIERSON, Salem. Catillac, and Louise Bonne de Jersey Pears.

ELNATHAN DODGE, Beverly. Cathead Apples.

ALLEN W. DODGE, Hamilton. *Apples*,—Minister, Kerry Pippin, Winter Russet Sweet, Lebanon Sweeting, Danvers Winter Sweet, Fameuse, Baldwin, Hubbardston Nonsuch, Winter Sweet. Blue Imperatrice Plums. Orange Quinces.

J. W. TREADWELL, Salem. *Pears*.—Gansel's Bergamot, Seckel, Ambrette, Messire Jean, Chaumontelle, Brown Beurre, Catillac, Bartlett. Apples, unknown.

THORP FISHER, Salem. *Pears*,—Long Green of Autumn, Passe Colmar, Seckel, St. Michael, Napoleon. Isabella Grapes.

WM. C. BARTON, Salem. *Pears*,—Seckel, Brown Beurre, Josephine, Andrews, Bartlett, Flemish Beauty. Isabella Grapes.

MISS CAROLINE BALDWIN, Salem. *Apples*,—Spice, Monstrous Pippin, Blue Pearmain, Rhode Island Greening.

D. A. WHITE, Salem. Pound Pears.

MRS. ELIZABETH PORTER. Bartlett Pears.

F. H. BURBANK. Haskell's Sweeting Apples.

CHAS. A. ROPES, Salem. *Pears*,—Bartlett, Passe Colmar, Beurre d' Amanlis, Louise Bonne de Jersey, Andrews, Beurre Diel.

J. J. ASHBY, Salem. *Pears*,—Louise Bonne de Jersey, Marie Louise, Passe Colmar, Glout Morceau. Ribston Pippin Apples.

J. G. SPRAGUE, Salem. Late Crawford Peaches.

SAMUEL KEMP, Salem. Seckel and Bartlett Pears.

DAVID PERKINS, Salem. *Pears*,—Frederic de Wurtemburg, Washington, Bartlett.

DANIEL C. BOWDITCH, Salem. Seedling Peaches.

WINTHROP SARGENT, Salem. *Pears*,—Washington, Gansel's Bergamot, Belle Lucrative, Capiaumont, Bartlett, Frederic de Wurtemburg, Golden Beurre of Bilboa, Cushing, Buffum, Passe Colmar, Winter Nelis, Easter Beurre, Seckel, Napoleon, Glout Morceau, Urbaniste, Louise Bonne de Jersey, Henri Quatre, Flemish Beauty, Brown Beurre, Johonnot, Lawrence.

J. C. HOWARD, Salem. Early Crawford Peaches.

S. WEBB, Salem. Peaches.

J. PRATT, Salem. Beurre Bosc and Belle Lucrative Pears.

TIMOTHY ROPES, Salem. *Pears*,—Golden Beurre of Bilboa, Washington, Louise Bonne de Jersey, Beurre Bosc, Bartlett.

STEPHEN CARLTON, Lowell. St. Michaels Pears. Jaques Peaches.

P. P. PINEL, Salem. Monsieur le Cure Pears.

AUGUSTUS STORY, Salem. Seedling Peaches.

B. F. IVES, Salem. Bartlett Pears.

JOHN ALLEY, 3d., Lynn. Chelmsford Pears, grown on apple stock.

S. RUSSELL, Middleton. Two varieties of Peaches.

G. CREELMAN. *Apples*,—Rhode Island Greening, Kilham Hill, Russet Pearmain, Baldwin, Fall Harvey.

ISRAEL TRASK, Beverly. *Apples*,—Hubbardston Nonsuch (?).

JAMES MILLS, Salem. Bartlett Pears. Three varieties of Apples. Native Grapes.

E. S. L. RICHARDSON, Kendall, Ill. *Apples*,—Golden Russet, Stannard's Seedling, Conant's Red Winter Sweet, Native Crab of Illinois.

MRS. SARAH MANN. *Apples*,—Russet, Greening, and one unknown Pippin.

THOMAS HOLMES, Salem. *Pears*,—Bartlett, and one variety unknown. Two varieties of Peaches.

JOSEPH A. GOLDTHWAITE, Salem. *Pears*,—Louise Bonne de Jersey, Long Green, Flemish Beauty, Seckel, St. Michaels.

SAMUEL HONEYCOMB, Salem. *Pears*,—Bartlett, Flemish Beauty, Frederic de Wurtemburg, Duchesse d' Orleans, Julienne. Bergen's Yellow Peaches.

WILLIAM SAWYER, Boxford. Lombard Plums. Yellow Alberge Peaches.

G. W. GAGE, Methuen. *Apples*,—Seedling, Porter, President, Bean, Rhode Island Greening, Gilpin, Baldwin, and four varieties unknown. *Peaches*,—Yellow Rareripe, Bergen's Yellow, Jaques, George Fourth, four seedling varieties.

SAMUEL SAWYER, Methuen. Peaches.

M. L. ATKINSON, Lawrence. Six varieties of Peaches. Baldwin Apples. Native Grapes.

J. D. WATERS, Salem. Bartlett Pears.

A. EDWARDS, Beverly. Bartlett and Seckel Pears. *Apples*,—Golden Russet, and two seedlings.

E. SHAW, Beverly. *Apples*,—Gloria Mundi, Baldwin, and one variety unknown.

R. FRANKS, Salem. Coe's Golden Drop Plums. Peaches.

D. PUTNAM, Danvers. *Apples*,—Snow, Aunt Hannah, President, Fall Harvey, Sweeting, Golden Russet, Kilham Hill, Porter, and one variety unknown. Beurre d' Amanlis Pears.

BENJAMIN P. WARE, Marblehead. *Apples*,—Porter, Ribston Pippin, English Red Pearmain, Bean, Rhode Island Greening, Drap d' Or, Pickman Pippin, Baldwin, and one variety unknown.

WILLIAM H. FOSTER, Salem. Buffum Pears. Peaches. Russet Pearmain and Rhode Island Greening Apples.

F. W. TUTTLE, Salem. Jalousie and Figue de Naples Pears. *Apples*,—Minister, Ribston Pippin, Golden Russet, Rhode Island Greening, Roxbury Russet, Porter, Kilham Hill, Pumpkin Sweeting, Hubbardston Nonsuch.

JOHN HENFIELD, Salem. Alexander Apples.

JOHN BROOKS, Salem. Danvers Winter Sweet and Baldwin Apples.

ISRAEL REA, Topsfield. Apples, unknown.

SAMUEL T. HUSE, Lynn. *Pears*,—Catillac, Duchesse d' Angouleme, Golden Beurre of Bilboa, Bartlett.

MOSES PRINCE, North Danvers. *Apples*,—Sweeting, Porter. Seedling Peaches.

JAMES CLARK, Salem. Louise Bonne de Jersey Pears.

N. KELLEY, Salem. Chelmsford Pears.

S. C. PHILLIPS, Salem. *Pears*,—Long Green, Seckel, Andrews, Buffum *Figs. Lemons.*

PORTER J. GOULD, Middleton. *Apples*,—Winter Sweet, Mammoth Pippin, Queening. Seedling Peaches.

R. BECETT, South Danvers. Peaches.

NATHAN COOK, Salem. *Pears*,—Andrews, and one variety unknown. *Apples*,—Ribston Pippin, Danvers Winter Sweet.

ANDREW DODGE, Wenham. *Apples*,—Gravenstein, Hubbardston Nonsuch, Gloria Mundi, Sweet Baldwin, Minister, Fameuse, Rambour d' ete. *Pears*,—Bergamot, Winter Nelis, Long Green, Catillac.

JAMES F. MANN, Ipswich. Bartlett Pears. Golden Russet Apples.

JAMES PEATFIELD, Ipswich. Pike Pearmain Apples.

MRS. T. SANDERS, Salem. Gansel's Bergamot Pears.

C. M. BAYLEY, Newburyport. Bartlett Pears.

J. HOOD, Salem. Seedling Apples.

JAMES A. BREED, Lynn. *Pears*,—Monsieur le Cure, Duchesse d' Angouleme, Flemish Beauty, one variety unknown.

HENRY POOR, North Andover. Flemish Beauty Pears. Porter Apples. *Peaches*,—Royal George, Early Red Rareripe.

F. HOWES, Salem. Beurre Bosc and Virgalieu Pears.

EZRA DODGE, Wenham. Bartlett Pears. *Apples*,—Kilham Hill, Roxbury Russet, Golden Russet, Red Reading. *Nectarines.*

A. T. WELLMAN, Lynn. Bartlett Pears.

JOHN R. POOR, Danvers. Golden Beurre of Bilboa Pears.

R. T. Sims. Seckel and Bartlett Pears. Porter Apples.

Joseph Dalton, Salem. *Pears*,—Duchesse d' Angouleme, Napoleon. *Apples*,—Bellflower, Hubbardston Nonsuch. Isabella Grapes.

S. B. Ives, Salem. *Pears*,—Pound, Long Green, Seckel. *Nuts*,—European Walnuts.

J. Berry, Middleton. Golden Beurre of Bilboa Pears. Seedling Grapes. *Apples*,—Porter, York Russet, Baldwin, Greening, Ribston Pippin.

J. Adams, Newbury. Native Grapes.

T. Dixon, Salem. Several varieties of Pears grown on Mountain Ash stock.

Rufus Slocum, Haverhill. Nectarines.

Horace C. Ware, Salem. President Apples.

Abel Burnham, Gloucester. Two varieties of native seedling Grapes.

H. Mason, Marblehead. Fall Harvey Apples.

J. Dempsey, Danvers. Drap d' Or, and Hubbardston Nonsuch Apples, Seedling Peaches.

James D. Black, Danvers. Danvers Winter Sweet Apples.

N. G. Symonds. Red Magnum Bonum Plums.

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## FLOWERS.

James Upton, Salem. *Dahlias*,—Lady St. Maur. Salvia fulgens, Salvia splendens. Geraniums, Verbenas, &c.

W. A. Wallis, Salem. Bouquet of Dahlias, Asters, Gladiolus, Hemerocallis, &c.

Eben F. Taylor, West Danvers. Marigolds.

Miss R. S. Ives, Salem. Bouquet of Neottia cernua.

Miss E. S. Mann, Salem. Bouquet of Dahlias, Marigolds, &c.

Mrs. J. D. Treadwell, Salem. Asters, Dahlias, Marigolds, Gladiolus, Hemerocallis, Verbenas, &c.

Miss M. R. Kimball, Salem. Gentiana crinita.

George Driver, Salem. *Dahlias*,—Cleopatra, Dodd's Prince of Wales. Oakley's Surprise, Standard of Perfection, Caleb Cope, Lady St. Maur, Essex Triumph, Eclipse, Primrose, Argo, &c.

T. Fisher, Salem. *Dahlias*,—Indispensible White, Pickwick, Lady St. Maur, Catleugh's Eclipse, Princess Radzville, Cheltenham Queen, Viscount Ressequier, &c.

Stephen Driver, Salem. Pansies.

George Pettengill, Topsfield. Dahlias.

Miss M. L. Mellus, Salem. Verbenas, Asters, Dahlias, &c.

Eben Buswell, Salem. *Dahlias*,—Beauty of Birmingham, Cleopatra, Sir Edward Antrobus, Admiral Stopford, Oakley's Surprise, Viscount Ressequier, Pickwick, Lady St. Maur, Indispensible White, &c.

William Weeks, Salem. *Dahlias*,—Mrs. Rushton, Argo, Striata, &c. Also, Stocks, Asters, &c.

Stephen Webb, Salem. *Dahlias*,—Admiral Stopford, Pickwick, Caleb Cope, Catleugh's Eclipse, Marshal Soult, Ansel's Unique, Mackenzie's Perfection, &c.

B. GARDNER, Salem. *Dahlias*,—Indispensible White, Cleopatra, Striata, Marshal Soult, Pickwick, Horace Binney, Argo, &c.

MISS CAROLINE A. MORSE, Methuen. Five bouquets of Dahlias.

T. ROPES, Salem. *Dahlias*,—Gurling's Prince of Wales, Lady Von Brandestein, Lady Ann Murray, Fireball, Beeswing, Constantia, Indispensible White, Catleugh's Eclipse, Princess Radzville, &c.

GEORGE W. GAGE, Methuen. Bouquet of Dahlias.

A. L. PEIRSON, Salem. *Dahlias*,—Striata, Gurling's Prince of Wales, Cleopatra, Premier, Ithuriel, &c.

MICHAEL RYAN, Salem. Bouquet of Dahlias, Stocks, Phlox, Maurandia Barclayana, Petunias, Antirrhinum, &c.

MISS WILSON, Saugus. Marigolds, Asters, Hollyhocks, &c.

FRANCIS PUTNAM, Salem. *Roses*,—La Reine, Duchess of Sutherland, Aubernon, Baron Prevost, Madame Laffay, Madame Damame, Mrs. Eliot, Devoniensis, Bon Silene, Bossuet, Anne Boleyn, &c. *Dahlias*,—Beeswing, Arethusa, Picotee, Duchess, Cheltenham Queen, Marchioness of Exeter, Unique, &c. Also, Verbenas, Asters, Chryseis, Zinnias, &c.

ANDREW DODGE, Wenham. *Dahlias*,—Pickwick, Sulphurea Elegans, Argo, Widnal's Queen, Calypso, &c.

MISS SARAH H. ROPES, Salem. Bouquets of Dahlias, Asters, Phlox, Golden Eternal Flower, Hemerocallis, &c.

NICHOLAS BOWLER, Lynn. Design of a Harp in natural flowers.

EDWARD D. ROPES, Salem. *Dahlias*,—Master George Clayton, Fireball, Indispensible White, &c.

JOHN BERTRAM, Salem. *Dahlias*,—Ithuriel, Cleopatra, Cheltenham Queen, Constantia, Marshal Soult, Miss Percival, Striata, &c.

T. DALAND, Salem. *Dahlias*,—Argo, Mrs. Rushton, Striata, &c.

FRANCIS WADE, Ipswich. Bouquet of Dahlias, Honeysuckles, Asters, &c.

MRS. T. SANDERS, Salem. Bouquet of Dahlias.

SIMON RYAN, Salem. Bouquet of Phlox, Dahlias, Petunias, Marigolds.

HENRY K. OLIVER, Lawrence. *Dahlias*,—very superior flowers, among which were Madame Zahler, Jenny Lind, Roi des Pointelles or King of Tips, La Tour d' Auvergne, Miss Vyse, Mrs. Blackburn. Also, Cobea scandens, Phloxes, Asters, &c.

MRS. JOSEPH G. WATERS, Salem. Bouquet of Dahlias, Marigolds, Asters, &c.

ALEXANDER DONALDSON, Salem. *Dahlias*,—Argo, Marshal Soult, Constantia, &c.

JOSEPH WILKINS, Salem. Bouquet of Dahlias, &c.

JAMES H. HOLMES, Salem. Bouquets of Fuchsias, Phlox, Lilies, Dahlias, Asters, Coreopsis, Antirrhinum, Sedum, Trollius, &c.

JOSEPH S. CABOT, Salem. Tradescantia virginica, Gaillardia aristata, Aconitum chinense, Catanancha bicolor, Œnothera macrocarpa. Phloxes; Alcardi, Princess Marianne, and Blanche de Neuily; Antirrhinum majus five varieties of, Trollius americana, Pansies, &c.

H. WHEATLAND, Salem. *Dahlias*,—Sir Edward Antrobus, Marquis of Cornwallis, Roi des Pointelles, Lady Ann Murray, Viscount Ressequier, An-

tagonist, Eclipse, Indispensible White, Mrs. Shelley, Ithuriel, &c.; also, Gladiolus floribundus, and natalensis, Asters, Verbenas, Stocks, Honeysuckles, &c.

JOHN C. LEE, Salem. *Roses*,—Hermosa, Agrippina, General Dubourg, Le Brun, Pierre de St. Cyr, Mrs. Bosanquet, Napoleon, Blush Tea, &c. *Dahlias*,—Marshal Soult, Ansel's Unique, Charles XII, Striata, Mrs. Rushton, Sulphurea Elegans, Premier, Constantia, &c.; also, Stocks, Asters, Verbenas, Penstemon, Lathyrus odoratus, Delphiniums, Antirrhinums, Zinnias, Balsamines, &c.

W. D. PICKMAN, Salem. Salvia splendens and fulgens, Achillea ptarmica, Helianthus grandiflorus, Viscaria oculata, Gomphrena globosa, Asters, Zinnias, Roses, Delphiniums, Celosias or Coxcombs, Antirrhinums, Pinks, &c.

JOHN W. DOWNING, Salem. *Dahlias*,—Arethusa, Beeswing, Cleopatra, Cheltenham Queen, Lady of the Lake, Raphael, Mrs. Shelley, Marchioness of Ormond, Sir E. Antrobus, Pickwick, Constantia, &c. &c.

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## POT PLANTS.

From E. H. DERBY, Salem. Orange and Lemon trees, in fruit.

From W. D. PICKMAN, Salem. Achimenes rosea, and other varieties. Russelia junca, Fuchsias, and Ericas, several varieties.

From F. PUTNAM, Salem. Metrosideros, Gloxinias, Achimenes, and Fuchsias, in varieties.

From J. M. IVES, Salem. Fig tree in fruit.

From C. W. MAY, Salem. Orange trees in fruit.

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## VEGETABLES, &c.

A. NESMITH, Beverly. Seedling Potatoes. Beets.

A. HATCH, Saugus. Seedling Potatoes.

E. M. TAYLOR, West Danvers. *Potatoes*,—Peach Blow, and Early Nutmeg. Onions.

W. POOR, Andover. Black Potatoes, sample of eighty-five bushels, the product of one-third of an acre.

H. MASON, Marblehead. Marrow Squashes. Onions.

JOHN W. TREADWELL, Salem. Celery.

JOHN M. IVES, Salem. Sweet Potatoes.

JAMES UPTON, Salem. Onions, Turnip Cabbage, Canada Crook Neck Squashes crop of 1849 and 1850.

A. A. EDGERTON, Danvers. Sweet Potatoes.

JOHN CLARK, Salem. Millet, and Black Sea Wheat.

JESSE ESTES, Middleton. Mountain Sprout Watermelon.

JONAS HARRINGTON, Danvers. Marrow Squashes.

J. K. HAINES, Salem. Crook Neck Squashes.

JOHN ALLEY, 3d., Lynn. Averlene Cabbage.

JOHN TROW, Hamilton. Marrow Squashes, six in number, two hundred and twenty-five pounds weight.

MRS. S. LORD, Salem. Variety of Pickles.

P. FARMER, Salem. Crookneck Squash, last year's growth.

B. D. Hill, South Danvers, Tomatoes, and Snake Cucumbers.

Niles T. Phippen, Salem. Texas Corn.

M. L. Atkinson, Methuen. Corn.

Israel Rea, Topsfield. Corn.

Moses Pettengill, Topsfield. Corn.

Israel Trask, Beverly. Crook Neck Squash.

J. Burpee, Georgetown. Broom Corn.

E. R. Mudge, Lynn. Celery, Egg Plants, Tomatoes.

John Bradstreet, Danvers. Potatoes; planted two and a half bushels last year, and got seventy-five bushels, only five years from the seed.

Gilbert Conant, Ipswich. Southern Corn.

M. P. Atwood. Marrow Squashes, five in number, weight one hundred and twenty-two pounds, from one seed.

N. Woodbury, Salem, One Valparaiso Squash, weight thirty-five pounds.

Henry Poor, Andover. White Flint, and Red chaff Chili, and White chaff Chili Wheat.

W. G. Lake, Topsfield. Gourds.

A. Cowdry, South Reading. Pumpkins.

W. Fairfield, Salem. Turnip Beets.

W. D. Pickman, Salem. Celery, and two mammoth Squashes, weight of the largest, eighty pounds—the smallest, fifty pounds.

## REPORT ON ESSAYS.

The Committee have examined the several Essays placed in their hands by the Secretary, without any inquiry by whom they were written, or whence they came. They understand the premiums to have been offered, for such essays on any Agricultural topic, as in their judgment, are worthy of publication. Three of those presented come fully up to the standard required, and consequently are entitled to the premium of ten dollars each.

The committee are pleased that this mode of diffusing information is so favorably estimated. It has now been continued, in this and other Societies, for several years, with marked approbation. They cannot doubt that experiments of this kind, embodying and condensing what has been learned, on a particular topic, may be quite as useful to those who engage in them, and to the public generally, as experiments in the cultivation of particular crops. In the one case, the cultivator finds his reward mainly in the crop produced,—in the other, the public are mainly benefitted, by the mental efforts of the author. He that applies the mind, to the improvement of society, is no less a working man, than he who labors with his hands,—all is labor for the general good.

In expressing their approbation of the papers presented, they would not be understood as ENDORSING all the statements or theories contained. These must stand or fall upon their own merits, or upon the credit of their authors;—but simply the general scope and execution. A prime quality in an essay, is close adherence to the subject, together with a complete comprehension of it. An address may speak of matters and things in general,—an essay should be limited to the subject under discussion, and should, as far as possible, without being diffuse, give a complete view of it. Several of the essays, heretofore approved by the Trustees, have been models worthy of imitation. And if we do not mistake, those now presented will be read with much interest and instruction.

The paper on "top dressing for mowing and pasture lands," is a fair illustration, of the committee's idea of a good essay.

It met the hearty approval of them all. Some queries arose in their minds as to the use of Gypsum, or Plaster of Paris, and the ashes of Anthracite Coal, as manures, nevertheless they will not venture to interpose their conjectures, in opposition to what may be presumed to be the results of well conducted experiments. The timely suggestion of hints to induce such experiments, may often be as beneficial as the experiments themselves.

The paper on "diaries, or farm accounts," (a subject alluded to in our Report the last year,) carries upon its face its own demonstration. Whatever is worthy of being remembered, is worthy of being recorded, both for our own benefit, and the instruction of those around us. The perusal of this essay brought distinctly to mind the practical illustration of this subject by Washington, and the theoretical suggestion by Colman, both of them teachers whose precepts will grow brighter by use. Whoever shall attempt to make such a record, will surely find therein an ample reward.

The paper "on the rearing of turkeys," cannot fail to awaken the most agreeable sympathies of every thankful heart. Where is the son of New England, who cannot cast his thoughts back to that period of his youth, when his eye glistened with the hope of the "fatted turkey," under the parental roof on "Thanksgiving Day,"—a time honored Puritan festival, that should never be forgotten. Whatever shall have a tendency to keep alive these customs of our fathers, is worthy of being cherished, especially when the suggestions bear indisputable evidence of being the result of actual observation. This too, we consider a good model of an essay.

The comparative merits of the different essays approved, and consequent labor in the preparation of the same, induces the suggestion, that in the offer of these premiums, a discretionary power should be given, to make the premiums proportionate to the value of the production, not exceeding a prescribed sum. This form of offer has been adopted by other Societies, and it appears to be worthy of imitation.

By order of the Committee.* J. W. PROCTOR.

Salem, Nov. 15, 1850.

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* F. Howes, of Salem, E. Mosely, of Newburyport, Rev. D. G. Estes, of Amesbury, J. Little, of Newbury, J. W. Proctor, of Danvers.

# ESSAY

## ON TOP DRESSINGS FOR MOWING AND PASTURE LANDS.

BY CHARLES L. FLINT.

Some soils must, from their nature, be kept in perpetual grass. Such are rough pastures, rocky hills, and low lands subject to frequent overflows. Stiff clay soils, too, require an amount of labor, in tilling, wholly disproportioned to the returns they yield. But these, if properly managed, may be made as productive, or nearly so, as the finer loams. Steep hills cannot be ploughed to advantage, since the best parts of the soil are washed away. Other lands, from their situation about the house or the cottage, cannot, conveniently, be tilled.

It becomes, then, a question of much practical importance to many, how these lands are to be improved? A course of interesting experiments which have come under our observation, have induced us to throw out the following hints, hoping they may be of use to those practical men who have not the time or the inclination to attempt doubtful experiments.

The difficulties which attend this subject arise from the necessity of using more or less of scientific terms in explaining the effect of particular applications to the soil. This will be avoided so far as it can be.

It is a matter of regret that the improvement of waste lands has not been treated in a manner which its importance deserves.* The idea was formerly entertained that pasture lands were sufficiently enriched by the animals which fed them. Practical men begin to think otherwise. It is found that a profitable return is made for the little outlay which they require. Particu-

* The practical effect of this inattention to the importance of waste and pasture lands may be distinctly traced in the eastern part of Massachusetts. Notwithstanding the rapid improvement in almost all other departments of agriculture, and the increase of arable lands, it will be admitted, I think, that a large part of our pasture lands are in a worse condition now than formerly. This subject is worthy to excite the attention of practical and scientific agriculturists.

larly is this the case with pastures fed by milch cows. They do not return the essential elements of the plant to the ground. These elements are required in great quantities to form their milk, while in other animals they are required only to form their bone and muscle. The ordure of cows is, therefore, far less valuable and fertilizing than that of other animals. The consequence is, that lands fed wholly by cows are exhausted much sooner than those fed by other animals. For it is evident that where more is taken from the soil than is returned to it, an exhaustion must eventually follow.*

We furnish animal and vegetable matters to the earth, to supply it with substances which the growth of plants has taken from it. It will be obvious, on a moment's reflection, that the constituent parts of the plant are taken up from the earth and the air, in much the same manner as our food and drink become our bone and flesh. The analogy is still more distinct when we reflect that all our applications for the improvement of the soil, are nothing more than the supply of food for plants.

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* The question whether milch cows exhaust the phosphates of the soil, is of somewhat recent date, and may, perhaps, be regarded as still unsettled. For my own part, reasoning from scientific principles, I cannot doubt it. There have been many and accurate analyses of milk, all showing a large amount of phosphate. This must be over and above what, in common with other animals, goes to form the bones. I hope to be able, at some future time, to bring some valuable statistics to bear on this subject. Whether this exhaustion of phosphates is directly connected as cause and effect, with the *bone disorder* in cows, is another interesting question. It has lately been very ably discussed in the New England Farmer, Vol. I, Nos. 22 and 25, and Vol. II, Nos. 3, 6, 9, &c.

I am not prepared to say that the so called bone disorder is the effect of exhaustion of phosphates in the soil, but the question is of such practical importance, that I cannot forbear a remark upon it. When, on old pastures, the phosphate is gone, the quantity necessary for milk, which is one of the most abundant secretions of the cow, must be absorbed from the bones, just as in case of a broken or fractured limb an absorption takes place from that limb by other parts of the body, leaving it smaller than before. This absorption of phosphate from the bones, must produce a weakness and debility of the system. Wherever this disorder has manifested itself, I would most confidently recommend the application to the pasture, of a mixture of leached ashes and bone dust in nearly equal proportions. This will both increase the quantity and quality of grass, and in case the bone disorder arises from want of phosphates, increase the health and strength of the cow.

For the food of plants is found in all manures, and the value of these depends upon the quantity they contain.

The methods of renovating mowing and pasture lands by means of top dressings, do not essentially differ. We have seen an interesting experiment during the present season. On different parts of the same field, simple meadow mud, rich barn manure, and liquid manure impregnated with lime, were used as a top dressing. The mud was hauled out last autumn and thrown in heaps, and there left to the action of the frosts and snows of winter. In spring it was spread nearly at the same time the other manure was applied. Strange as it may seem, the top to which the mud was applied, appeared to far the best advantage. The grass was heavier, and after the crop had been removed, that part of the field on which the mud was applied, came in more quickly and luxuriantly than the rest. This field was a light gravelly soil, which had not been under very high cultivation. A large proportion of the soils of Massachusetts are composed of gravel with a mixture of sand. These soils peculiarly need the constituents of marl and meadow mud. Marl and mud contain the carbonate, or in some cases the sulphate of lime, which is the same as plaster of Paris. They contain a large mixture of clay, which sandy or gravelly soils need. And on these soils clay mud has been found to do the best. Peat mud is a rich vegetable food, and if a small proportion of potash, or ashes, is added, it is nearly, if not quite, as valuable as the best barn manure. Light soils are always improved by any substances which make them firmer and more compact. Stiff clay soils, on the other hand, are benefitted by applications which make them lighter and more permeable. No one of the three kinds of earth, the sand, the clay, and the lime, when unmixed with the other varieties, would be capable of supporting vegetation. The mixture of them, when any one predominates, will correct and improve them. For the fertility of soils depends upon the proportion of their constituents. In some marls the clay predominates. These should be used on the light sandy soils. In others the sand predominates. These are adapted to stiffer lands. Here the judgment must be exercised. The practice of mixing soils has always been attended with success when judiciously managed.

Nor is this application of mud and clay any new fact to the practical agriculturist. It was practised in England nearly two thousand years ago. The county of Norfolk, in England, is said to owe much of its great fertility to this source. The greatest European improvements in sandy soils, have been made by these means, in Belgium. They do not operate so rapidly as quick lime, but their effect is far more lasting. So lasting, indeed, that our Anglo Saxon fathers thought they were felt for eighty years. As intimated in the experiment alluded to, it has always been found best to expose the mud or clay to the action of the frost. It becomes mellowed so that it may be spread evenly upon the grouud. Peat mud is composed of vegetable matter which has been accumulating for ages. When taken fresh, it is found to contain an amount of acid which would make it improper for immediate use. Exposure to the frost, wind, and rain, entirely neutralizes the acid properties. Ashes, or potash, would have the same effect.

These substances may be said rather to ameliorate and improve the texture of soils than to furnish immediate sustenance to the plant. And in this view, they cannot be too strongly recommended, for we have never known them to fail of having the most beneficial effects, both on pasture and mowing lands. And besides, the application of them is so simple, so much within the reach of every farmer, that it is well worth the trial. If the soils are much worn, or very barren from a great preponderance of any particular earth, a liberal allowance will be required. Ordinarily, as in the experiments which have come under our notice, some twenty-five or thirty cart loads to the acre have been found sufficient to increase very greatly the productiveness of the land. A still less quantity would be of essential service. Nor is the expense of this application so great as some imagine, for almost every farm contains a quantity of waste peat meadow, and clay is almost always near at hand. It may be removed and prepared at a season of the year when there is but little else to do. The expense, therefore, need not deter any one from its use.

But there is another substance equally accessible, which acts both as an ameliorator and a fertilizer of the soil. It is, per-

haps, one of the cheapest and most profitable top dressings. It is the rich loam which accumulates in the holes by the road side, and wherever the wash gathers from hills. Every one has observed the effect of the loam thrown out upon the grass in ploughing. The grass along the edges soon becomes greener in spring, and grows with greater luxuriance. The wash by the road side would have a far more powerful effect. For this contains, besides the putrescent animal matters, from the road, a quantity of sand, which rich soils wanting closeness and consistency, require on the surface. Spread upon such soils when covered with grass, it is very efficacious, and makes the vegetation as vigorous as the most stimulating manure. Very many experiments have clearly shown that the effect of sand on such soils is better than any manure could be.

Among the mineral manures, lime is often used as a top dressing. We have seen this employed with good effect. We are inclined to think that this effect arises not from any direct nutriment furnished by it to the grass, but from its influence on the substances in the soil. It hastens the decomposition of vegetable matters in the earth. In this way it renews exhausted soils. It increases the temperature. Hence its great benefit on low, wet lands. It causes a rapid decay of all peat substances. Hence its great use in the compost heap. It destroys the mosses and coarse herbage which work in among the grasses, and indicate the want of lime in the soil. It produces from them a fine vegetable mould. Hence its utility on lands which are "run out."

If what has been said be true, it appears that lime can never supply the place of other manures. There are properties which it cannot supply, which plaster can; others which it cannot supply, as bones can; and others which it cannot supply like ashes, and manures that contain salts. There are situations, however, in which it is invaluable. On reclaimed meadow lands, after thorough draining, and a covering of three or four inches of gravel, a top dressing of lime has a most wonderful effect. Crops of grass of two and three tons to the acre, have been taken after such a dressing of lime. In many cases the first crop will repay the expense of bringing such

land into cultivation. In these situations, then, as well as on low pastures, it may be called one of the cheapest and most useful applications that can be made. Such lands will bear an abundant supply of lime, without exhaustion. Indeed, the effect of lime on these lands is better and more lasting than that of any other manure. But on poor sandy soils it should never be used. It will soon exhaust and render them completely barren. When it meets with clay in lands to which it it is applied, it forms a kind of marl, and greatly improves the texture of the soil. But when it comes in contact with sand, it forms, rather, a sort of mortar. Hence it is injurious on sandy soils. Many earths have naturally a sufficient quantity of lime. On these a further application is not needed.

No definite rule, with respect to the amount required, can be given. It must depend upon the nature of the soil, and must be left to the judgment of those who use it. In general, on peat and clay soils, from ten to fifty bushels to the acre will be required, though less would be beneficial.

The addition of lime to the compost heap, is always of the highest importance. The decay of all vegetable substances is greatly accelerated by it. We shall have occasion to allude to this hereafter.*

* These opinions with reference to the use of lime, had been written before we had the satisfaction of finding that they agreed substantially with the views expressed by Prof. Playfair. Mr. Anderson, in the Journal of the Highland and Agricultural Society, for 1843, says: "Whether spread on the surface of pasture land alone, or in compost with earth, or applied with a crop and grass seeds, with a view to pasture, it never fails to call into existence the dormant seeds of the superior grasses in the soil, and to nourish and facilitate the growth of those that may have been confided to it by the agriculturist. This is a fact beyond dispute. It is a never failing fertilizer of grass land."

Prof. Playfair, speaking of the application of lime to grass land, says: "The farmer liberates, by this means, the silica, the potash, and the phosphates from the soil, and enables them to administer to the wants of vegetation. But by the operation, he has furnished no equivalent for that removed by the crops. The lime is the key, merely, by which you opened the magazine of food contained in the soil. But it not unfrequently happens, that it may itself supply an absent constituent of the soil, especially in cases such as clover and grasses which experience much benefit from this article. There is no manure more beneficially used or more disgracefully abused, than lime."

*European Agriculture, II, page* 361, *Note.*

We come now to the use of ashes as a top dressing. Of this we may speak with more confidence. For while experiments with lime have not invariably proved successful, owing, probably, to the soils designed to be benefitted, we know of no instances in which the application of ashes has not fully repaid the expense. If farmers would bear in mind that ashes contain all the elements which assist the growth of plants, they would be unwilling to part with a substance which they might turn to such profit. If the quantity is small, let it be husbanded with the greater care, instead of being sold, with the idea that so few can do no good. One substantial farmer says, "I am now, more than ever, fully persuaded of the value of ashes as a manure. Nothing in the whole catalogue of manures, compares with them on my land. The soil was a thin clayey loam, and where the ashes were sown there was a crop of excellent clover where for years the land had been almost unproductive."

Grasses are more benefitted by ashes than other crops, since they require a greater amount of the salts which ashes contain. For all permanent mowing lands, especially on the lighter soils, ashes are among the cheapest of manures. In parts of Flanders and Belgium, countries in which the science of Agriculture has been carried to a higher perfection than in any other part of Europe, the great loss of vegetable matters from the soil is constantly restored by ashes or bones, together with other manures to be mentioned hereafter. Indeed almost all agriculturists, both in Europe and America, have attached very great importance to the use of ashes. In some parts of Germany they are held in so high esteem that they are transported to a distance of eighteen or twenty miles, to be used as a top dressing. According to Prof. Liebig, with every one hundred and ten pounds of leached ashes of the common beech tree, spread upon the soil, we furnish as much phosphate as five hundred and seven pounds of the richest manures could yield. Now phospates are highly useful to all kinds of soil.

There can be no doubt that the process of leaching takes from the ashes a part of their fertilizing properties. For many uses, this is no objection. Especially is this the case near the

sea, where leached ashes are thought, by some, to be even more serviceable, as the salt in the atmosphere the more readily combines with them. Every practical man has heard of the amazing effects which bone dust has upon the soil. Yet this is valuable, chiefly, for the phosphates it contains. But if we may rely upon the statement of Prof. Liebig, leached ashes also contain a large amount of phosphate of lime, which would show them to be extremely valuable. But suppose we allow four bushels of leached ashes to one bushel of crushed bones, the expense of the ashes would, in most cases, be less than the bones. But if bones can be procured, a mixture of leached ashes and bones, four bushels to one, forms the most useful application that can be made. The compound should remain a week or two before being used. Those who have tried leached ashes, have been fully satisfied of their superior qualities as a fertilizer. Careful experiments, by careful, conservative men, show that land producing one ton to the acre, has been so improved by this means, as to yield three tons to the acre. Where thirty bushels were used on three fourths of an acre, the crop was increased more than three fold. Nor are leached ashes subject to the objections which are raised by some against the use of lime. They do not apparently exhaust the soil. The effect of them is felt for several years. Many farmers have found by experience, that one bushel of unleached hard wood ashes is nearly equal to two bushels of plaster, as a top dressing for the dryer grass lands. If this be true, what has been said would show that leached ashes are about equal to plaster in their effects on such lands. A peck of lime is commonly used in leaching a bushel of ashes. This, of course, adds much to the value of leached ashes for grasses. They contain, also, a portion of the alkali which is decomposed by the action of the atmosphere, and the water in the soil prepares it for the food of plants.

As we have already spoken of the use of mud, it is proper here to say that ashes may be mixed with mud in the proportion of six or eight bushels to the cord. The mud is better, as usual, dug in the autumn, though the mixture might be made in the spring, or on application to the soil. If leached

ashes are used, the proportion may be about one to three. In this case the two substances mutually assist each other, and the compound is, perhaps, better than either alone would be. So potash added to peat mud, makes a compound equal to the best stable manure.

In these remarks no mention has been made of coal ashes as a top dressing. There is a very common impression that these are worthless. We have known of their use in but few instances with decided advantage. On clay soils they may, perhaps, be of some value, but other substances will be found more profitable. In this connection we should allude to the practice of burning sea-weed as a manure. The ashes of it are spread upon grass and pasture land. They form a very useful and powerful stimulant, but the process of burning sea-weed causes the loss of its most fertilizing qualities. The most common and efficient mode of application is to carry it directly upon the grass as a top dressing. The coarse rock-weed and kelp decay in a much shorter time than the fine sea weed, and are, perhaps, better than this. Whenever sea weed is used, it is best on sandy or gravelly soils. From twenty-five to thirty, or even forty cart loads to the acre, are sometimes applied. Peat ashes form, in some cases, a valuable top dressing for grass and pasture lands. In Holland, where every fertilizer is preserved with care, peat ashes as well as wood and coal ashes, are highly esteemed. The great value of the first is well known to many, and if those who have them will spread them upon grass at the rate of fifteen or twenty bushels on the lighter, and thirty or forty on the heavier soils, they will be abundantly repaid.

If what has been said be true, and it is the result of many experiments, some of which have come directly under our own observation, farmers would do better to buy ashes on the return of every spring, than to sell them, as is very often the case in this part of Massachusetts.

Of the use of gypsum, or plaster of Paris, the most contradictory opinions have been expressed. So far as our observation goes,—and we have both seen and tried many interesting experiments on the old soils of this State, and the newer soils

of Maine,—the application to moist soils has been fully satisfactory. It has been said that plaster does not benefit natural pastures. This is not strictly correct. In recent experiments on pasture lands, the result has been wonderful. In April of last year, a large pasture which had become worn and somewhat unproductive, received a generous top dressing of plaster, The grass started sooner and continued throughout the season to look far better than the adjoining pastures of precisely the same soil. So far as could be ascertained, the increase in grass over the adjoining pastures, was about seventy-five per cent. Nor was this all. This pasture came in the present season with the greatest luxuriance. And to this day its load of beautiful green is the wonder of the neighborhood. Its effect on clover and Timothy is even greater than on pastures. Many have supposed that plaster would exhaust the soil. This would not seem to be the case, for as it takes four hundred and thirty parts of water to decompose one part of plaster, its decomposition is slow, and consequently its influence is felt for several years. How, then, can it have such immediate and beneficial effects? It retains the fertilizing gas which is constantly rising from fermenting vegetable matter, and gives it up at a proper time for the nourishment of the plant. It does not, like lime, cause vegetable matters to decay, but rather when they decay, holds their most important parts from escaping.

The infectious odor, which rises from decaying vegetable matter, from the stable, from the manure heap, and imperceptibly from the whole surface of the earth, is far the most important element for the growth of the plant. Plaster fixes this, and the first shower washes it into the earth, to feed the roots of plants. The relative value of manure, depends upon the amount of this noxious odor, this ammonia which it contains. This gas, commonly known as hartshorn, is an exceedingly powerful stimulant. Nor will it appear unimportant, when we bear in mind that two and one quarter pounds of this ammonia, lost by fermentation, is equal to the loss of one hundred and fifty pounds of grass or grain. Scientific men will say that this gas is taken up in the atmosphere by the rain, and descends with the rain to fertilize the earth. This is very true.

This ammonia, this infectious odor, so valuable, so indispensable to the earth, is not lost forever when it flies away into the air. But does not the shrewd farmer perceive that as much of this as he allows to escape from his own lands, by neglect, falls upon, and improves the fields of his neighbor as much, and perhaps more, than his own? Is it not evident that by saving all that he can, and by receiving whatever the genial rain brings with it, he gets a double benefit?

If the effect of plaster is such as we have described, no one can fail to see how important are the functions it may be made to perform. But it also adds a certain amount of lime and sulphur to the earth. It is composed of these substances for the most part, and hence called by chemists, sulphate of lime. We shall have occasion to speak of its use in connection with other manures, when we speak of the compost heap. We now allude to its use by itself, as a top dressing.

On some soils it is not so satisfactory as on others. But our pastures are many of them covered with the white honeysuckle. These might be called clover lands. On all clover lands, whether reserved for pasture or mowing, plaster has a most wonderful influence. No other manure produces such an enormous increase of vegetable growth, in proportion to the quantity applied. Most manures require to be used in quantities far exceeding the bulk of the expected increase. Not so with gypsum. A bushel, or two bushels to the acre, have been known to double the crop, and to add more than twenty times its own weight to it. Even greater results have followed. For if we may believe one of the most distinguished French chemists,* every pound of nitrogen which we add to the grass, increases the produce one hundred and ten pounds, and this increased produce of one hundred and ten pounds is effected by the aid of a little more than four pounds of gyysum, or plaster. Another accurate investigator,† found by actual experiment that the ashes of an acre of red clover, contain no less than three bushels of plaster of Paris. This important fact proves that the earth already contains a large amount of this

* Boussingault, Ann. de Ch. et de Phys. t. 43, p. 243.

† Davy, Agricultural Chemistry.

substance, and that it is essential to the growth of clover. This may, perhaps, explain why clover so soon runs out to give place to other grasses. The requisite supply of plaster has been exhausted. In any case, the addition of plaster to clover lands, and especially to pastures, is of the highest importance.

The effect of charcoal is somewhat similar to plaster. Charcoal will absorb ninety times its own bulk of ammonia, which is held from escaping till it is separated by water and carried into the earth for the plant. When dry, the operation of fixing the gas is repeated till the next shower sends the gas into the earth, and the particles of water take its place in the charcoal. In this way, as a top dressing, charcoal as well as plaster, performs the most important functions. If we take any decaying animal matter, which has begun to give off its offensive and noxious odor, its ammonia, and cover it with charcoal or plaster of Paris, this escaping gas is immediately stopped. No infectious odor arises from it. The decay of the substance has suddenly ceased. This simple fact will show the intelligent farmer to what purposes these substances may be applied. His choice of these should depend somewhat on the expense of procuring them. The relative expense depends so much upon circumstances, that we need not make the estimate. As an absorbent and retainer of the valuable properties of manure, peat mud and loam will also be found of essential service. If used on a high and dry soil, the effect of plaster will not be very apparent the first season, unless like the present, there are frequent rains.

There is an impression among many that plaster does not produce so good results in the immediate vicinity of the sea shore. This, we think, does not arise from the proximity to the sea, but from other causes. Many of our lands do not need the application of plaster. We have seen it used, to the best advantage, within two miles of the sea. If there were any thing in the sea air to prevent plaster from performing its usual functions of fixing the rich gases, the effect would be perceived to a far greater distance inland. If any failures have occurred in its use in the vicinity of the sea, they were proba-

bly owing to the soil rather than to the atmosphere. There is one other remark in this connection. When plaster has been applied without immediate effect, we should not at once conclude that it is useless on the particular soil to which it is applied. The first season may be dry, and ill adapted to its decomposition. In such cases, good results have ordinarily followed the second year.

The great utility of bones as a manure, arises from the large amount of phosphates which they contain. On all pastures which have been long fed, the phosphate of lime is exhausted. It is constantly taken from the earth in the grass, to form the bone, the muscle, and the milk of animals.* Of the earthy matter in bones, nearly five sixths consist of phosphate of lime and magnesia. Nitrogen is also abundant, and, of course, ammonia, for this is an element of nitrogen. A few bushels of bone dust will often quite restore old worn out pastures. Indeed, almost every part, of which bones are composed, goes directly to the nourishment of vegetable life. The ashes of all grains are very rich in phosphate of lime. This shows the importance of furnishing this element for their use.

But, it may be asked, how are we to know when bone manure is required? Doubtless every farmer has observed the eagerness with which animals, and particularly milch cows, seize bones whenever they can find them. Cows require a large amount of phosphate of lime, and when their feed is destitute of it, they are compelled to seek it in the bones. And when they are seen to resort to them for it, we may be sure there is a deficiency in their pastures. Bones have been much longer and more extensively used in England than in this country. More than twenty years ago, the importation of bones into England amounted to more than forty thousand tons a year, at an expense of more than five hundred thousand dollars. Their use has been much increased since. They are

* The *bone disorder*, to which allusion has been made in a former note, has sometimes been thought to arise from something the cows eat in the pastures. If this were the case, why should not other animals, fed on the same pastures, be affected by it. If it arise from the exhaustion of phosphate, it would seem more proper to ascribe it to *something they do not eat!*

brought from all parts of the world. Agents are employed in this country to collect bones to enrich the farms of England. It is to be hoped that every farmer will save a substance which has been so long thrown away, and which would prove one of the richest manures he could use. The bones, when dry, may be crushed and pulverized with an axe. There are rainy days enough which would not be better employed. Mills are established in various parts of the country, for the purpose of grinding bones. They are sometimes ground in plaster mills. A mixture of crushed bones and ashes, or leached ashes, forms one of the most valuable top dressings. Nor will this application, in small quantities, be thought expensive, when we consider that the animal part of bones, which amounts to about one third, contains eight or ten times as much ammonia as the ordure of the cow, and that the fertilizing salts in bones are sixty-six times the amount of a like quantity of the ordure of the cow.* So that a smaller quantity of bone dust will answer the same purpose of a much larger quantity of manure from the stable. We can but hope that every farmer will try the experiment. It may be done on a small scale, at first, though in the vicinity of every butcher's establishment, bones can commonly be procured in any quantity.

Thus far we have treated of manures which belong more peculiarly on the surface, as a top dressing for grass. For though they are sometimes used, especially plaster, on ploughed land, with potatoes and other crops, yet their influence on the surface is thought to be far more effective. Indeed, the benefit of lime, plaster, and charcoal, would, in a great measure, be lost were they to be buried to any depth in the earth. But there are other manures which are often used as top dressings. Little need be said of the comparative value of animal substances. They have been artificially applied from the greatest antiquity. They are mentioned by Homer, which distinctly shows that their value was understood a thousand years before the Christian era. There is every reason to believe, moreover, from other ancient authors, that great care was exercised in preserving and applying manures to fertilize the earth. Nor

* We state this on the authority of Dr. Dana.

is there any reason to suppose that Agriculture, as an art, was not carried to as great perfection among the ancient Romans as it has been either as an art or as a science, among the moderns. For it is a curious fact that the Roman agricultural literature far exceeded the modern in extent and richness, till within the last fifteen or twenty years. And it would be easy, if this were the proper place, to trace the points of resemblance between the Romans and ourselves, not only in general modes of cultivation, but also in the details of agricultural life, and in the tools they used.

It is still a question, whether the real value of stable manure is not as great on the surface, if applied at a time when the rich gases are not lost by evaporation. It is, perhaps, better, if lands admit of ploughing without too great expense, to cover such manures with the soil. But we have already seen how this gaseous matter may be saved from loss by evaporation, by the addition of charcoal or plaster. If this loss is prevented, top dressing is by far the least expensive, when the object is simply to renovate the soil, and improve the quality and increase the quantity of grass.

In a case which we have in mind, a very poor, worn out grass lot, was top dressed with fourteen ordinary cartloads of good stable manure to the acre. The quantity of grass was increased four fold. Clover and Timothy came in as luxuriantly as on any new laid piece. If the top dressing were repeated once in five or six years, there would be no danger of exhaustion, though there would be an advantage in loosening the earth with the plough. But the use of stable manure should be confined mostly to mowing land. On closely fed pastures it would be injudicious, from its exposure to the sun. On these, ashes or plaster would be better.

It would lead us beyond the limits of our present purpose, to enter into the details of the preservation of the animal manures. But we must be permitted to make a few suggestions which have been forced upon us by some years of observation in this and in other states. It is a very common practice to suffer the manure from the barn to lie exposed for months to the winds and the rains of summer and winter. Many farmers have no

arrangement by which the liquid and most valuable part of stable manure is saved. And yet, under all these disadvantages, they are too apt to congratulate themselves on having so many loads of manure. They do not consider that it is the quality, and not the quantity, which adds richness to the soil. The practice of digging a cellar under the barn, is becoming more common among enterprising farmers, and it may be said that the increased value and quantity of the manure, is enough to pay for more than the interest of the extra expense. Protected manure is far the most valuable. But in cases where this has not and cannot well be done, much of the real value may be saved by forming the yard so that nothing may escape. Let peat mud and loam be thrown in, to absorb what would otherwise be lost. Plaster occasionally thrown into the yard is like money—I will not say in the saving's bank,—but rather put to compound interest. In Flanders, where the greatest economy is practised, the liquid of a single animal is estimated at from ten to fifteen dollars a year. This applied as a top dressing, has a surprising effect.

No one should neglect to form a compost heap. It may be so made as to form an extremely valuable article for top dressing. A quantity of meadow mud should be dug out in the autumn for this especial purpose. That this is indispensable, will be seen from the fact that two cords of peat mud, added to one cord of good stable manure, will make a compound of three cords, as valuable as clear barn manure. This has been tried repeatedly, and is constantly done by those who are ambitious to excel in farming. To this compost heap should be added, from time to time, all the animal and vegetable matter adapted to ferment and enrich the soil. Woolen rags, the remains of fish, the blood and flesh of animals, the hair of animals, all these make an exceedingly rich manure. A most intelligent gentleman connected with a wool factory, informs us that a cord of matter collected at the establishment, is worth at least five or six cords of the best stable manure, for a top dressing. This we cannot doubt, for here are the blood, the wool, pieces of the skin of the animal, a little lime, and many other substances, all collected together. A fermentation takes place, by

which the richest gases are formed. Such a compost heap, with an addition of loam and mud, would be invaluable for a top dressing. But though in most cases all these substances cannot be procured, many of them can, and should be saved by every one who is desirous of improving his land. Those who are near the sea, or near the market, can procure an abundance of fish to add to the compost. Nothing is better for soils than this. A little lime added to the heap, causes its rapid and thorough decomposition. Ashes should also be added. When additions of manure are made, they should be covered with mud or loam, to prevent waste.

We need not enter more minutely into the details of forming the compost heap. It is sufficient to say, in a word, that every thing capable of fermentation, should be added to it. The lower layer should be of loam or mud. Nothing is more common among farmers, on the death of a horse or any other animal, than to throw the body away. It is estimated by some, that the body of a single horse, when divided and mixed with peat mud and loam, will make a compost worth fifteen or twenty cords of the best and richest manure. This is, perhaps, too high an estimate, but animal substances ferment rapidly, or rather they may be said to putrefy without fermenting, so quick is their decomposition. If leaves, grasses, moss, straw and other substances of like nature, are used, lime will be indispenable, in causing their rapid decay. When these are well fermented, the heap should be thrown over, and if made long and narrow, so as to expose the greater surface to the air, it will be better. Whenever such a compost has been used as a top dressing, it has produced the most astonishing effects. Many experiments have shown that this is the best way of using such a compost heap. In the fertile county of Hertford, in England, it is seldom used in any other way. It cannot be too highly recommended.

Animals fed on rich food make far the most valuable manure. This will serve to show why the manure from the sty is so fertilizing. Swine are fed on a great variety of rich food. The actual profit of raising them, arises mainly from the amount of substances they will mix together and make into good manure.

Let the sty be supplied, at intervals, with mud, loam, and other vegetable matter, and farmers will not complain of the cost of these animals.

Liquid manures are highly useful to grasses. Care should be taken to apply them, also, to the compost heap. The richness of manure from the sty, is owing mostly to the great quantity of liquid matter. Hence the importance of adding a great variety of vegetable substances, loam, and mud. In a word, it may be said that all liquid manures contain a large amount of nitrogen, which is one principal ingredient of ammonia, to which we have alluded. The importance of saving the liquid of the stables, either with the compost, or to be applied by itself, may be seen, also, in the fact that the exceediug richness of guano, and the ordure of all fowls and birds, is due to the union of the liquids and solids. Spent ley from the soap boiler, is also a powerful liquid application. It shows its good effects for years, when properly applied.

After fermentation has taken place in animal manures, in the compost or elsewhere, they may be spread without much loss by evaporation, and hence it matters not whether the top dressing is applied in the autumn or in the spring. Plaster is better spread in the spring, when the moisture of the earth makes it immediately available. Not so with other manures. Some prefer the autumn for spreading these, while others prefer the spring, just before the thick grass surrounds and protects them from the sun and wind. The soil, in autumn, is not injured by the loaded cart, as is apt to be the case in spring. Others still, apply them after the first mowing, and before the summer rains. The new crop preserves the manure from drying up and wasting. This, however, is ordinarily too busy a season to attend to it with convenience.

There is no objection, as many have supposed, to feeding off mowing lands in the autumn. In spring the ground is injured, and the roots started from the soil too easily. Not so in the autumn, when the soil is dry and firm. The grass is benefited, rather than injured by it. On pasture lands in which the grass is run out, seed may be sown just before the top dressing. Thus the old roots will be assisted, while new ones will come in to improve and increase the food for cattle.

We have spoken of some of the top dressings which will prove beneficial to pasture and mowing lands. We have not aimed to treat of them in any abstruse and scientific manner. Nor have we been anxious to mention and dwell upon every possible substance which would serve a good purpose as a top dressing. It was our aim to set forth the peculiar advantages of such as could be available to most farmers of enterprise. In the choice of these, regard should be had to the soil, to the season, and to the expense compared with the probable result.

The great secret of success in farming, is to do things well and cheaply. We do not believe that in our country, except, perhaps, in the immediate vicinity of the market, a very great outlay, what is commonly called high farming, for the sake of increased crops, is expedient. Many a rich man has ruined himself by farming for display. But every one knows that our work should be done with system, with care, with vigilance against waste. Manure high, make, if possible, rich gardens of every field, but let the manure be made, so far as it can be, from the natural resources which every farm possesses. Draw from the meadow, the ditch, the roadside, the woods, whatever will enrich the soil. Nor does cheap farming, imply that the buildings, the fences, the roads about the farm, be neglected. Ditching, draining, reclaiming useless lands, these form a sort of reserved fund for the farmer.

And when these, his appropriate tasks are completed, then all the powers of nature help him rise to competence, to honor, and to happiness. Then, what a life is his! What quiet without envy! What freedom from intrigue! What calmness! What serenity! His sleep is sweet. When morning comes, the very animals hasten with glad step to welcome his approach. These joys are for him to appreciate, who aims to secure that higher culture to which every task of life is subservient!

# ESSAY

## ON REARING TURKEYS.

BY ALLEN W. DODGE.

The increased attention excited these few years past in the poultry yard, the pains that have been taken to procure new and valuable breeds of fowls, and the high prices which choice specimens of some varieties have recently commanded, prove quite conclusively that the rearing of poultry is to occupy a higher rank, than it has heretofore done, in our stock husbandry. Poultry may, indeed, be considered as holding a similar relation to the other stock of the farm, that the smaller and rarer fruits hold to the staple products of the orchard. But a short time ago little or no attention was paid to the cultivation of plums, cherries, strawberries, and other garden fruits. The winter eating, and the cider apple, was all that the farmer thought worthy of his care, in the way of fruit culture. But with the increase of population, in our cities and large towns, a demand has been created for these choicer fruits. The cultivation of them has been extended, and in the raising of such fruits as cannot be brought from a distance without damaging, if not wholly spoiling, the farmer, not less than the suburban gardener, will find an increasing profit.

So too, the markets, with the growth of our cities, demand larger supplies of poultry; and poultry, especially early chickens, cannot well bear a long transportation without injury. Hence, there is less competition from abroad in the sale of them. They command, and, for some years past, have commanded a good price, such as is more remunerative than that paid for the beef and pork raised here. Now the business of poultry raising may be overdone,—the market glutted and the producers out of pocket. But this is not yet the case. On the contrary, the demand for eggs and poultry, as for other delicacies of the table, is increasing, as the natural effect of the

growth of wealth and population among us. If these statements are correct, it follows that poultry may be made a more extensive and profitable part of the animal products of our farms, than they have heretofore been.

The fowl mania now so prevalent, may to some have the appearance more of fancy than utility; but there will be this benefit growing out of it, that new and valuable breeds of poultry will be introduced aud disseminated. The mania will abate after passing its crisis, if it has not already passed it, while the effects of the excitement will be for the general good. The efforts of those who have evinced so much laudable enthusiasm in this direction, seem to have been confined principally to the procuring and propagating of pure specimens of the different breeds. Their form, color, and other distinctive properties, have been duly ascertained and promulgated; but the general management of fowls and their habits, the rearing and fattening of them, with other important particulars tending to make them profitable, have not, as it seems to me, received their proportionate share of attention. The great question with a New England farmer—I mean a practical and not a fancy farmer—as to the raising of any animal or crop is,—will it pay? If he is satisfied that it will, he may be induced to enter upon it, though the fixed habits of most of our farmers make them averse to deviate from the beaten and safe path, into new practices however promising. Still, the all powerful influence of a new and successful example, often compels imitation. Thus may be witnessed in particular neighborhoods, particular courses of husbandry, that have been started by some enterprising cultivator, who, perhaps, was considered at first as rash and inconsiderate as was Jared Elliot, when, more than a century ago, he began to reclaim a shaking meadow of forty acres in Guilford woods, Connecticut. "The meadow," he says in his Essays on Field Husbandry in New England, "was deemed so poor that none would take it up. I was pitied as being about to waste a great deal of money, but they comforted themselves that if I spent it unprofitably, others that stood in need of it, would get it." And he adds, with an honest pride in the result of his efforts, "they are of another opinion now."

But it is not my object to give directions as to farm management in general, but to offer some hints, derived principally from experience, on the rearing of turkeys in particular. The first grand requisite is, to have good stock to raise from, both male and female. The cock turkey should be of a large size, and as he does not attain to his full growth till he is two or three years old, one of this age is to be preferred, though yearlings are generally made to answer. The color I should choose, would be jet black or bronze, with legs to match. The books give directions as to the gait and mien deemed essential to his perfection; but there is little difficulty in finding a gobler, whose strut is sufficiently martial to satisfy the most precise stickler for a military carriage. With tail erect, breast inflated, and head and throat inflamed, he marches, a perfect Hayneau of the poultry-yard. The question is discussed, too, in the books, as to the number of females that should constitute his harem. But it is for us more of a theoretical than practical one, as there are here hardly ever more hens allowed to this feathered sultan, than can be suitably provided for by him. A greater point is to prevent a deterioration of stock by breeding in and in. The excellent rule given by Mrs. Sarah Dakin, of Duchess County, N. Y., in a statement on the management of poultry, "Be sure and change the tom turkey every year," is confirmed by the practice of the most successful turkey rearers. A strong and healthy brood of chicks is thus secured.

With the same view, the largest hen turkeys—and if they are more than a year old the better—should be reserved for mothers. Those that are small in size will lay only small eggs, from which the chicks hatched will be of corresponding proportions. If you expect a large litter of eggs, the hens must be well kept through the winter, but not so as to become very fat, otherwise they will not lay so early as is desirable. If they do not begin to lay till May, they will not complete their litter and be ready to sit till June, which will bring the hatch into July; and thus will be allowed for the growth of the young brood only five months to the last of November, at which period the annual turkey killing comes round in New

England, as regularly as Thanksgiving. It is considered, therefore, by all experienced persons, of great moment to have an early litter of eggs, the first turkey's egg being often a matter of as much congratulation in the family, as the first baby's tooth.

The turkey is an out-of-door bird. In this respect he retains even in his domesticated state, that love of freedom which characterizes the aborigines of our country. Turkeys have no fondness for a shed or barn, as a roosting place, but in the coldest weather in winter, in the severest storms of snow, sleet or rain, they prefer the open air and a lofty tree on which to take up lodgings for the night. Here, perched head to the wind, they ride out the hardest gales in safety and with apparent pleasure. The instances are rare in which they are known to perish, either from the cold or storm. Dickson, an English writer, says that "it is important, during winter, that their perches should not be exposed to the sweep of frosty winds, which are apt to cause the feet of turkeys to freeze," and the same caution is given by Dr. Bennett, in his work on poultry. But such a misfortune I have never known to befall turkeys, that all winter have risked themselves out on trees over night. When the old hens shed their feathers late in the fall, as will be the case when they have continued to lay a number of litters, it is well to house them in cold nights till they renew their coat, and it may be prudent to do so in extremely severe weather in winter.

We will suppose now that winter is gone, and spring is beginning to open. The notes of the robin are heard welcoming the advent of warmer skies. As the snow melts away, patches of green earth are here and there disclosed to view. Your turkeys no longer hang about the barn, like so many loafers, but spend most of their time in the orchard, and on the sunny side of walls and buildings. The gentleman of the party is as full of airs as any city exquisite, perambulating hither and thither, in front and at the side of his companions, more intent on exciting admiration of his own person, than bestowing it upon theirs. This species of courtship continues throughout the spring, even after the hens have laid out their litters

and have begun to sit. His attentions to them during this latter period often become so officious and annoying, that it is best to separate him entirely from them. The hen turkey is very shy in selecting her nest, and is sometimes so particular as to be a number of days in securing a place to her fancy. In this she is probably governed by an instinct, to provide a safe place for her eggs and her young. The first intimation, after mating, of her disposition to lay, is by her stealing away from her companions, going here and there with head down, as if meditating upon the task before her. If closely watched, she will be most likely to give up the project for the present. Even after she has begun to lay, she must be followed only at a distance. A better way to find the nest, if out of doors, is to observe the direction in which she returns from it. This very season, one of my turkeys that was laying a second litter in a neighboring thicket, was watched a number of hours on two successive mornings, and yet she gained her nest the first morning in secresy; and on the second, as if fully apprehending the system of espionage established over her motions, she wandered around and through the thicket, and at length returned home and dropt her egg on the open grass plat in front of the house.

If left to her own choice, the turkey will usually make her nest out of doors, at the side of walls, under a bush, in long grass, or in a thicket. Although so fastidious in the site of her nest, she is not at all particular as to the materials of which it is composed, and is as well contented with the bare ground as with a bed of leaves. After a place is selected, it is not always the first day or the second, that it is made the depository of the first egg. She seems intent rather on adapting herself to it, and endeavoring, like the boy in the new school house, "to get the hang of it." The number of eggs which a turkey will lay in the spring, varies from fifteen to twenty-five. They should be gathered daily—no nest egg is necessary—or as often as they are laid, and carefully kept in a cool place. If left out over night, they may be chilled or stolen. But to guard against such accidents, nature teaches the turkey—silly bird as we sometimes call her—just what to do, by covering

them carefully with a few leaves or spears of dead grass. To be sure she does this in warm weather as well as cold, but the covering serves equally in both to screen them from observation.

When she has laid her litter, the turkey manifests her desire to sit by remaining on her nest, even if no nest egg be under her. She should be permitted to do this for some days before the eggs are placed under her, observing however to drive her off at night if the nest be out of doors. When this is the case, it will not be safe to let her sit there, as the eggs and herself will be exposed to rats, weasels, skunks and other midnight marauders. A nest should therefore be prepared for her under cover. The barn is a good place for this purpose, and the scaffold or a mow of hay more suitable than the ground floor. Better still is a shed or an out-house, which can be kept fastened, as the liability to accidents is thus diminished to almost none at all. For a series of years I have kept my hen turkeys in a workshop, during the process of incubation. On one side of this is a carpenter's bench, the space under which is parted off with boards, making a number of apartments about three feet square for the nests, the hay of which they are composed being kept in its place by a narrow strip of board laid on the floor in front. The nest should be rather shallow, and spread out over sufficient space for all the eggs to rest on the surface.

The number of eggs that can be covered to advantage by a turkey, depends upon her size; twenty is a large number, and better success may be expected with fifteen or seventeen. Having placed them in the nest, allow the hen turkey to remain on her original nest, if out of doors, till dusk, and then carefully take her in your arms and remove her to her new abode. Sometimes she will be frightened and disposed to escape. To prevent her leaving, I secure a piece of lattice, made of laths, in front of the nest under the bench, immediately on placing her there. Similar screens I have attached to all the nests, thus keeping the inmates as securely shut up, as if they were in so many cages. This arrangement demands more care of the turkeys than when they have their liberty, as they must be let off every day or two to eat and drink, and for health and

cleanliness. The way once learned into the building, there is no trouble in their returning to it afterwards. The turkey is a close sitter, so close that I have almost uniformly been obliged, on removing the lattice, to use some effort to drive her off. She quits reluctantly; when off, she feeds, she drinks eagerly; she runs about quickly, pecking the green grass, and if she can find any loose dry dirt, she settles herself in it, flopping the dirt rapidly with her wings over her body, and then hastens back to her nest. This adhesiveness to her eggs grows stronger as the time of hatching approaches. She should then be disturbed but seldom. Four weeks is the usual term of her incubation, but it is sometimes protracted a day or two longer. It happens not unfrequently that turkeys, like some hens of the common fowls, do not incline to sit. When this is the case, they continue to lay litter after litter during the season, as do often the turkeys that have hatched, after their broods have attained to some size. The eggs may be used in the family. It is not advisable to have a hatch from a late litter of eggs; the chicks will not repay the cost and trouble of attempting to rear them. Turkey eggs may be placed under common hens, and hatched with success, if no more are used for this purpose than can be fully covered. This is a convenient arrangement in the spring, in order to enlarge other broods.

As soon as the chicks break the shell, it may be known by a peculiarly soft and tremulous sound uttered by the mother, as if recognizing the new-born brood, and expressing the anxious sensations that now throb in her bosom. I know of no sound more touching and plaintive—a sound which she never makes till this epoch in her existence. As they are hatched, it is well to remove the young chicks to the house, and to clear the nest of shells. But the chicks should be returned to the mother at night, or before; the natural warmth of her body being of more help to them than any artificial substitute. Sometimes a chick, in consequence of the pellicle which lines the interior of the shell adhering to it, is unable to free itself. Gentle means may be used to separate them, but care is necessary in the operation, or it may prove disastrous. A turkey will almost always hatch out the larger proportion of the eggs on which she has sat, and

not unfrequently the whole of them. I have known instances, when, on removing the old one for the first time after hatching, the entire brood presented themselves, as lively as the four and twenty blackbirds in the nursery song, when the crust of that famous pie in which they were baked, is opened to the wonder and admiration of all juvenile naturalists.

Now that the chicks have fairly entered on life, what is to be done with them? Leave them to the care of the mother—nature, you say, is the best guardian and provider. True, were the mother in the woods, wild and undomesticated. But she is under your protection, and in your hands is the destiny of her offspring. You must do something for them—at least after they are a day or two old—or they will perish from starvation. In doing this, however, avoid the too frequent and mischievous practice of stuffing and overloading them with food. They are but tiny birds, with constitutions as delicate as can well be imagined. Shun, too, the absurd treatment of thrusting a pepper corn down their throats, to invigorate them. But begin betimes to supply them with crumbs—not soaked in wine, as the English writers recommend—but softened in water. The same food of which the parent turkey eats, except grain in an unbroken state, the chicks will eat. The article most in use for this purpose, is Indian meal made into a paste, and this given to them in small allowances, will be sufficient for their present wants. They should for a week or more be kept under cover, and then they may be placed out of doors, in some enclosure, to prevent the old one from rambling. A frequent practice is to tie her to a stake, by a string attached to her leg. But with such a confinement she is not well pleased; and in one instance I have known a sad fate befall a turkey thus tied, being torn in pieces by a strange dog that attacked her. If it be desirable to confine the mother, it may be done by placing a crockery crate over her, at the sides of which the little ones could have easy passage in and out.

At night, and in wet weather, turkey chicks must be safely housed, and the house must be large enough to be well ventilated, and high enough at the door to drive in the old one without trouble. I should recommend invariably a floor of boards,

with the edges and those of the sides closely united, so as to keep out all intruders. For want of such a precaution, I lost in one night last spring the entire brood of a common hen, consisting of fourteen very early chickens—a rat or a weasel, well skilled in the art of mining, had burrowed under the sides of their house and made a clean sweep of them. The floor of the turkey house may be covered with fine hay, which should be frequently renewed for purposes of cleanliness. The cleaner the young chicks are kept, the less liable are they to be infested with lice. I know of no remedy for this evil—fat or oil rubbed on the chicks, is said to be effectual—considering in this, as in most of the disorders to which poultry are subject, an ounce of prevention worth a pound of cure.

As the chicks grow, they will need larger supplies of food. Curd and thick skim milk are good articles of diet. But here let me caution against giving any salt with the food of young turkeys. A farmer in my neighborhood lost his whole flock of forty or more, merely by feeding them once on skim milk, which had been salted. So far as I have observed, salt may be safely left before turkeys and other fowls, when they have attained to some size, as it is to be found on barn floors all winter, where the hay has been salted. But it would seem from the above fact, that the crops of young turkeys are not adapted to its use. The books mention certain other articles as injurious to them—marrowfat peas in particular—but I have never known any ill effects to turkeys from this description of pea, nor can I see why it should be poisonous to them more than the other varieties. For drink, let them be supplied with water, placed in shallow vessels.

After a few weeks, the young brood may be allowed to accompany the mother in her rambles, with full liberty to go where she pleases, giving her the range of a pasture if practicable. They will soon learn to forage for insects, which promote their health and thriftiness. Dry summers make large turkeys; the weather is almost uniformly favorable to their rambling, and grasshoppers are plenty. But in wet seasons they thrive less rapidly; they find fewer insects, and lose many days in remaining idle. A flock of turkeys, in foraging

for food, spread themselves at some distance apart, and thus advance, devouring in their course every insect on which they can fasten their bills. As accidents of various kinds may befall the young chicks, it is well when two broods are hatched at about the same time, to join them together, and to house them with their mothers in the same coop at night. The old ones will shortly associate together, taking equal care of the members of the families thus united, and forming a double protection in times of danger. And if it be necessary to hunt them up at evening, you will thus save many steps by making but one journey for both flocks. If, however, they be fed regularly at night, they will soon learn to come home of themselves.

At six weeks or two months old, the young turkeys begin to "shoot the red," as it is called, by which is simply meant that the red granular excrescence on the head and neck, begins to develope itself. This is a critical period in their existence. If there be much wet weather, they will drop off in considerable numbers. It may safely be asserted, that from loss at this time and before, not more than two thirds of the chicks that are hatched, survive. But when they have shot the red, turkeys are thenceforward the hardiest of all poultry. They have literally passed their climacteric, and food, food, and a plenty of it, is now nearly all that they require. This they will obtain, till it is time to fatten them, principally in the fields; and of course unless there is a sufficient range for them, they cannot be reared to advantage. They may soon be made to roost on a tree, provided with boards for them to go up into it. It is safer, however, for them to make their first efforts at roosting in a shed or barn, as they sometimes loose their hold of the roost, before they have become accustomed to it, and if out of doors may be picked up by some of those midnight prowlers that infest farm premises. After they have become accustomed to the tree on which they roost, they will generally repair to it every evening, seldom manifesting any desire for a change.

They now range farther and farther, sometimes so as to be mischievous to the grain fields and orchards of neighbors. To check this rambling propensity, the old one may be fettered by fastening her legs together with a piece of list a few inches in

length, so as to allow her just to hobble. The fetter can be removed in a few days, when the habit of strolling in the wrong direction is cured. But ramble they must, if they are to get their living by foraging in the pastures. If you have a bed of cabbages, be sure to protect them from your turkeys, or you will have only the stumps left for yourself. Early in the fall they should be fed night and morning with dry corn. When the weather becomes colder, they may be supplied at frequent intervals with a mash of boiled potatoes, Indian meal and skim milk, given to them warm. Of this they will eat most voraciously. They now ramble but little, preferring rather to hang about the sunny side of buildings and walls, from which they will hasten when called to their food, and having devoured it, repair thither again. Thus plentifully fed, they thrive most rapidly, increasing in size, in the short space of a six month, from the wee chick that was hatched in the spring, to the plump and tempting roaster, if a male, of twelve and fifteen pounds weight, and if a female, eight and ten pounds, at Thanksgiving.

Now it may fairly be asked, will the price at which turkeys usually sell in the market at that time, pay a profit for the rearing of them? It is difficult to tell the precise quantity of food consumed by a turkey from first to last, so as to estimate the cost of it. But when they bring fifteen cents a pound, I believe those that raise them are generally satisfied of the profits, taking corn at an average price. At any rate, I have been, from an experience of the past ten years; having during that time reared about fifty turkeys a year, and in one year eighty six young turkeys from six old ones. In the rearing of turkeys care and attention are all important. Ill luck will sometimes happen—but here, as in most other pursuits, ill luck is often only another name for a want of attention. It is a pleasant work to have the care of turkeys. They are company for you at all times; first to salute you with their jovial gobbling in the morning, and ready at any moment to run to you at your call. And the interest we take in them is all the greater, from the care and solicitude with which we have watched over them.

# ESSAY

## ON FARM ACCOUNTS—FARM DIARIES,

### AND AGRICULTURAL REGISTERS.

BY BEN PERLEY POORE.

Agriculture has at length become fashionable! Octogenarians who have acquired fortunes in the cities, return to the homesteads which they despised in early life; and resolute young men, finding little hope of success in the professions or in commerce, look—as did their ancestors—to the ample bosom of nature for their support. Politicians, who generally contrive to own at least a garden, are ever ready to descant upon the dignity of agricultural labor; while scientific book-worms cultivate potatoes, in order to experiment upon the practicability of increasing their growth by electric currents, or to try the virtues of magnetic hoes, in drawing out the rot.

Our Commonwealth cannot boast of many private collections of paintings or of statuary—a very insignificant fraction of her sons keep race horses or pleasure yachts—and even the "pomp and circumstance" of militia honor has sadly dwindled into disrepute. But in the environs of every city, near each busy manufacturing village, and in many a secluded spot, trim fences enclose "fancy farms," and buildings of quaint yet often fair proportions, proclaim the wealth, eccentricity, or exotic taste of the amateur husbandman. Many of these gentlemen, by the judicious employment of their capital, and by importing choice stock, confer benefits, (directly or indirectly,) upon the neighboring farmers—while others, who madly rush into every new theory, practically illustrate the folly of "sowing Spanish dollars, and reaping four-pence-ha'pennies."

Then we have the great body of Massachusetts yeomanry—so graphically described by Quincy as "men, who stand upon the soil and are identified with it; for there rest their own hopes and the hopes of their children. Men, who have, for

the most part, great farms and small pecuniary resources;—men, who are esteemed more for their land, than for their money;—more for their good sense than for their land;—and more for their virtue than for either. Men, who are the chief strength, support, and column of our political society, and who stand to the other orders of the State, in the same relation which the shaft bears to the pillar—in respect of whom, all other arts, trades and professions are but ornamental work—the cornice, the frieze, and the corinthian capital." Whatever tends to stimulate and direct their industry, spreads prosperity over their fields, or carries happiness to their homes, merits careful consideration, for it strengthens the foundations of our public renown.

Generally speaking, we find few farmers, either practical or fancy, who have a proper conception of their occupation. The mysteries of husbandry are considered but as the lesson of a day—and every man, the moment he becomes the occupant of a farm, is allowed to style himself a competent farmer. "Is there nothing in Agriculture," said Columella the Roman, "which requires to be studied? Is there nothing to reward research? For myself, when I take an enlarged view of this noblest of all pursuits, and survey it on all sides—and consider what it embraces that it would be profitable to know, I fear I shall see the end of my days before I shall become a thorough master of all its mysteries."

As it was in Rome, so it is in Massachusetts. We have our public men, who, like Cincinnatus, Denatus and Regulus, retreat from the cares and toils of state to the pure and unalloyed joys of agriculture and horticulture. Our poets and our historians, like Virgil, will leave behind them many a token of their devotion to rural pursuits. And our Legislators, by repeated grants of money, have shown their appreciation of Washington's declaration; that "in no way can more real and important services be rendered to a country, than by improving its agriculture." All this flatters the amateur farmer, and encourages the hard-working yeoman—it elevates the common calling of each in the social scale—but it does not make either "a thorough master of all its mysteries."

And what is the lot of a young man who has come from the city to be a farmer, and has invested his capital in land, stock, and tools? He has heard cattle-show orators eloquently descant upon the independence of his new pursuit, and implicitly believes Franklin's assertion—that "the farmer has no need of popular favor—nor of the favor of the great—the success of his crops depending only upon the blessing of God upon his honest industry." But he soon finds that industry must be well directed in order to be profitable, and he is often at a loss to know how and when to labor. Agricultural works and periodicals are generally so interlarded with individual speculations, that he turns from them in despair. Even the Reports of Agricultural Societies, which embody so much valuable information, only detail individual cases. They chronicle the management of the best farms in favorable seasons—the product and growth of superior beasts—the fruit produced by extra attention—and the mammoth varieties of the garden. The art of Husbandry may be gleaned from many a library, but the student-farmer may commit to memory scores of works on agriculture, and yet, like the Roman, "see the end of his days before he becomes a thorough master of all its mysteries."

These mysteries are not, after all, MYSTERIOUS. The young farmer who expects to enrich his land by some magical process, will be as much disappointed in his expectations as he is ignorant of the process of improvement. A mere theory, even if clearly defined, is idle and useless if unattended with practical observations; and the more practical information a young farmer can acquire, the deeper versed he becomes in the mysteries of his profession—those magical secrets, which enable his more experienced neighbors to bring home money from market. The lawyer finds the mysteries of his profession in almost innumerable volumes of Digests and Reports—the mariner is guided by the science of previous navigators, as laid down in books and on charts—the soldier learns how to manœuvre large bodies of men by reading accounts of successful campaigns—the statesman gleans wisdom from volumes of debates—and the editor seeks the mysteries of catering for the public taste, in old files of popular journals. But where can

the young farmer go for dates and details? He may pick up an old Almanac, containing a few memoranda of the domestic life of the writer's cows, and the time his goose commenced her incubation. And some meagre details, thus preserved, convince him that a Diary, kept by any practical farmer in his vicinity, would be a more valuable text book than Loudon's gigantic Encyclopedia.

Washington, (as we are informed by Dr. Sparks,) kept a Diary after he had exchanged his victorious sword for a pruning-hook, and noted each day's work with minute care. Subsequently, when called to the Presidential chair, we are told that, "He left with his chief manager at Mount Vernon, full and minute dircctions in writing, and exacted from him a weekly report, in which were registered the transactions of each day on all the farms, such as the number of laborers employed, their health or sickness, the kind and quantity of work executed, the progress in planting, sowing, or harvesting the fields, the appearance of the crops at various stages of their growth, the effects of the weather on them, and the condition of the horses, cattle, and other live stock."

Many other distinguished citizens of our Republic have since followed the example left by the "Farmer of Mount Vernon," and have testified to its benefits. Their recorded praises would occupy pages, and we will simply copy the opinions of one, who, by his moral worth, his purity of character, and his fidelity to the public interests, secured a place in the hearts of his constituents and friends—the lamented Daniel P. King. In a statement made by him to this Society, (see Transactions for 1845,) on the management and products of his farm, he says, "I have long kept a sort of diary in which I have noted the employments of each day, the time of planting, hoeing and harvesting, the amount of crops, the cost of animals, current receipts and expenditures, &c. The advantages of keeping a journal, to a farmer, are many. By turning to the pages of past years, he will be reminded of work which should be done in its season; he will see where he has erred, and profit from his experience; he will know where his money, sometimes difficult to account for, goes."

A striking proof of the practical value of farmer's Diaries, has recently been witnessed in the upper part of this county, where a large farm was worked for several years by foreign laborers, directed by a mere lad, who was placed in charge by the proprietor during his absence. The boy had no experience, and his judgment was of course limited, but he found counsel and guidance in the Diaries which had been accurately kept on the same farm for nearly twenty years preceding. Selecting the records of what had been done in years of similar temperature, he not only managed the work creditably, but left none of the minor details undone. [A specimen of the Diaries referred to above, is annexed to this Essay.]

Would it not be beneficial to agriculture, if the Societies instituted for its advancement, gave a certain sum for every well kept diary of a farm situated within their respective localities, with premiums for those which displayod the most industry and ability on their pages? By requiring them to be written on paper of a uniform size, several volumes might be annually added to the library of the Society, and from them might be compiled and condensed an Agricultural History of each year. Valuable, to the young farmer at home, as well as to the scientific agriculturist abroad, would be such a chronicle, and why cannot the Society in Essex county take the lead in this, as it has in other valuable movements?

FARM ACCOUNTS are of equal importance to individuals, although they are not of the same public value as diaries, unless when questions come up relative to the comparative profit of different soils, or of different applications of the same soil. "There is not a single step," says Mr. Young, in the twenty-eighth volume of his Annals of Agriculture, "in the life of a farmer, that does not prove the advantage of his keeping regular accounts—and yet there is not one in a thousand that keeps any. This is one, among the many instances, which in the enlightened situation of the practisers of the art, is the evident reason for the backwardness in which the art is found, by any man who searches for the principles deducted from a practice, which ought to give it the regularity of a cultivated science."

A few rough memoranda or figures, to yield a gross account

of the general receipts or payments, usually constitute the entire financial record of our farmers, even those who amass large sums of money. In every other pursuit in life, the advantages of clear accounts are so obvious, that book keeping, by the Italian mode of double entry, is an essential branch of public education. Business men, who are not regular in their accounts, are always rated as unsafe customers by the prudent portion of merchants—nor is there a greater reproach to a commercial house, short of insolvency. But agriculture seems destined to be, in all its details, an exception to every thing else. Men engage in it without previous education, or study, or even inquiry;—and they conduct large business in it without those accounts known to be necessary in every other pursuit.

Would it not be of great utility to every farmer, to have before him a correct statement of his stock, farm, crops and implements, taken at the close of the preceding year? From such certain documents, he would be able to proceed on his business in a more regular and methodical way, and consequently, with greater assurance of success, than if every thing, (as is too frequently the case,) were left to custom, chance, or the exertion of the moment.

In addition to this annual valuation, every farmer should keep a Cash Book, and a specimen is annexed to this Essay of a form which has been found simple and correct. Separate accounts may be opened under the heads of Garden, Potato Crop, Woodland, Dairy, Poultry—in short the relative expense, income, and profit of every branch of Agriculture may be accurately ascertained. Amateur farmers, particularly those who carry into the country the methodical habits of the counting-house, will find in foreign works, rules for making regular and multiplied entries of every transaction on a farm. The most esteemed of these works are: "Munroe's Guide to Farm Book-keeping," Edinburgh, 1825; "Trotter's Farm Book-keeping," Edinburgh, 1831; "Harding's Farmer's Account Book," London, 1846; "Barry on Farm Accounts," London, 1849.

To keep a Diary and Farm Accounts, a farmer must occupy some of his time, but, in so doing, he will improve his mind, which demands the same constant cultivation as his

land. "Experience," says Loudon, "shows that men situated like small farmers, (who are their own masters,) are very apt to contaact habits of irregularity, procrastination and indolence. They persuade themselves that a thing may as well be done to-morrow as to-day, and the result is, that the thing is not done till it is too late, and then hastily and imperfectly. Now nothing can be conceived better adapted to check this disposition, than a determination to keep regular accounts, and a diary. The very consciousness that a man has to make entries in his books of every thing that he does, keeps his attention alive to what he is to do; and the act of making those entries, is the best possible training to produce active and pains-taking habits." Should a society offer premiums for the best-kept Diaries, it would be well to make a class of those kept by boys and girls under fifteen years of age. The youth reared on the farms of New England, cannot have more profitable evening employment, as it not only tasks their mental capabilities, but fosters an attachment to their parental acres, and demonstrates the profit of well directed agricultural labor.

To the student of political economy, or of history, as well as of agriculture, a volume of Diaries kept at the same time, in different sections of a county, could not be destitute of value the next year—in a century it would be invaluable, for agricultural information is always read with interest. What farmer has not wished for more precise accounts of Noah's vineyards, and of Solomon's orchards, which "bore all kinds of fruit,"—of the cattle of Uzziah, who "loved husbandry," and of the operations of Elisha, who was found "ploughing with twelve yoke of oxen." We read in the Journal of the Pilgrims, among the interesting events which occurred in March, 1620, that; "Monday and Tuesday proved fayre days, so we digged our grounds, and sowed our garden seeds,"—a matter of no marvellous importance in itself, but worthy of remembrance as the commencement of those beautiful gardens which now adorn New England.

Let us then have in the library of every Agricultural Society, (in manuscript, if not in print,) AGRICULTURAL REGISTERS, compiled from the daily notings of practical farmers. They

will not only systematize and benefit the agriculture of the present day, but they will constitute a valuable inheritance for those, who may hereafter be placed upon the soil we occupy, "to dress it and to keep it."

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## SPECIMEN PAGE OF A FARM DIARY.

[Each operative on the Farm is distinguished by a number, in Roman characters.]

DIARY FOR THE WEEK COMMENCING MAY 10.

| *Weather.* | I. | II. | III. | IV. | V. | VI. | *Stock.* |
|---|---|---|---|---|---|---|---|
| SUNDAY, May 10. Blustering. | At church. " " | | | | | | brindle cow calved. |
| MONDAY, May 11. Pleasant. | Hauling manure to corn field. | Loading cart in yard. | Spreading manure. | In garden, digging beds. | In garden, digging beds. | At mill. In garden. | Grey mare shod all round. |
| TUESDAY, May 12. Pleasant. | Ploughing in manure on corn field. | Harrowing in corn field. | Driving plough team | Mending wall. | In garden, sowed beets and carrots. | Driving team for harrow. | |
| WEDNESD'Y, May 13. Fair, but windy. | Furrow'ed corn field, 5 rows to the rod, hills 2 feet apart. | Hauling manure to corn field. | Driving plough team. | Dropping manure in the hills, corn field. | Dropping manure in the hills, corn field. | Driving team. | bought eight sheep. |
| THURSDAY. May 14. Cool and blustering. | At market. | Planting corn. | Planting corn. | In garden, sowed late peas. | Planting corn. | Putting lime and charcoal round trees in back orchard | Cow crop-ear calved. |
| FRIDAY, May 15. Stormy. | Making up accounts. | clearing out hog-house. | Chopping wood. | Chopping wood. | Clearing out potato cellars | Shelling corn. | Sold black colt. |
| SATURDAY, May 16. Fair, and pleasant. | Trimming rose bushes, &c., in garden. | Hauling manure to garden. | Clearing up garden and spreading manure. | Mending wall. | Unwell, at town. | At mill. at blacksmith | Had old oxen shod. |

## SPECIMEN PAGE OF CASH ACCOUNT.

| CASH RECEIVED. | | | | | | CASH PAID. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Date.* | | *Of whom Received.* | *For what Received.* | $ | *cts.* | *Date.* | | *To whom paid.* | *For what paid.* | $ | *cts.* |
| Jan. | 1. | John Parker, | One ton of hay. | 14 | 00 | Jan. | 2. | Town Clerk. | Taxes. | 30 | 00 |
| " | 4. | W. Thompson. | Yoke of fat cattle. | 95 | 00 | " | 3. | Thomas Jones. | Wages on Farm. | 18 | 00 |

**Dr.** **William Sutton in account with the Essex Agricultural Society.** **Cr.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1849. | | | | 1849. | | | |
| Sept. | 28. | To balance of former account, | $825 97 | Sept. | | By amount of Premiums and Gratuities, awarded by the Trustees, | 628 11 |
| Oct. | | To Bank Dividends, | 235 14 | Dec. | 24. | By amount paid for the Colman Library, | 200 00 |
| Dec. | 24. | To State Bounty, | 600 00 | | | By Expenses, as follows: | |
| 1850. | | | | | | Of Exhibition of 1849, 324 68 | |
| April | 10. | To Bank Dividends, | 238 24 | | | Printing, 190 65 | |
| " | 10. | To amount received from new members, | 66 00 | | | Secretary's Salary, 75 00 | |
| | | To balance due Colman Library account, | 13 00 | | | | 590 33 |
| | | | $1,978 35 | | | By balance of Cash on hand, | 559 91 |
| | | | | | | | $1,978 35 |

N. B. The amount of unclaimed Premiums, this year, is $42, which is carried to the Colman Library account, leaving a balance in its favor of $13, as above.

## FUNDS OF THE SOCIETY.

| | | | | | |
|---|---|---|---|---|---|
| 16 | Shares in the Warren Bank, cost | 1,596 00 | Notes Receivable, | | 1,318 59 |
| 12 | " " Exchange Bank, par | 800 00 | Cash on hand, as above, | | 559 91 |
| 22 | " " Commercial " cost | 1471 66 | | | $8,717 41 |
| 7 | " " Mercantile " par | 700 00 | | | |
| 6 | " " Merchants " par | 800 00 | Funds in 1849, | | 8,983 47 |
| 5 | " " Village " par | 500 00 | Funds in 1850, | | 8,717 41 |
| 3 | " " Salem " par | 800 00 | | | |
| 12 | " " Danvers " cost | 1,171 25 | Less, | | 266 06 |

SALEM, September 26, 1850. E. E. WILLIAM SUTTON, TREASURER.

Salem, Nov. 23, 1850. We have examined the within account, and find the same correctly cast and well vouched.

R. S. DANIELS
ASAHEL HUNTINGTON. } AUDITORS.

# OFFICERS OF THE SOCIETY.

CHOSEN SEPTEMBER 26, 1850.

JOHN W. PROCTOR, of Danvers, *President.*
DANIEL ADAMS, Newbury,
*ASA T. NEWHALL, Lynfield,
BENJAMIN PORTER, Danvers,
RICHARD S. FAY, Lynn.
} *Vice Presidents.*
WILLIAM SUTTON, Salem, *Treasurer.*
ALLEN W. DODGE, Hamilton, *Secretary.*

## HONORARY TRUSTEES.

| | | | |
|---|---|---|---|
| Frederick Howes, | Salem. | James H. Duncan, | Haverhill. |
| Ebenezer Mosely, | Newburyport. | | |

## TRUSTEES.

| | | | |
|---|---|---|---|
| Lewis Allen, | Danvers. | Royal A. Merriam, | Topsfield. |
| John Alley, 3d, | Lynn. | Wingate Merrill, | Danvers. |
| Jacob Brown, | Ipswich. | E. R. Mudge, | Lynn. |
| David S. Caldwell, | Newbury. | Moses Newell, | West Newbury. |
| David Choate, | Essex. | Josiah Newhall, | Lynnfield. |
| Jeremiah Coleman, | Newburyport. | Andrew Nichols, | Danvers. |
| Andrew Dodge, | Wenham. | Thomas E. Payson, | Rowley. |
| George Hood, | Lynn. | Gardner B. Perry, | Bradford. |
| Joseph How, | Methuen. | William R. Putnam, | Danvers. |
| John M. Ives, | Salem. | Dean Robinson, | West Newbury. |
| Josiah Little, | Newbury. | James Stevens, | Andover. |
| Josiah Kimball, | Boxford. | John Stone, Jr., | Marblehead. |
| Joseph Kittredge, | Andover. | Horace Ware, Jr., | Salem. |
| Elisha Mack, | Salem. | Richard P. Waters, | Beverly. |

* Since deceased.

## MEMBERS ADMITTED IN 1850.

| | | | |
|---|---|---|---|
| Isaac Appleton, | Beverly. | David Larcom, | Beverly. |
| Franklin Alley, | Marblehead. | Abraham Lord, | " |
| John I. Baker, | Beverly. | Charles G. Loring, | " |
| Thomas P. Bancroft, | " | Calvin Locke, | Ipswich. |
| Richard S. Bray, | Newbury. | Lyman Mason, | Beverly. |
| Henry M. Brown, | Salisbury. | Appleton Moore, | Amesbury. |
| Samuel Chase, | Beverly. | Warren Ordway, | Bradford. |
| Stephen A. Chase, | Salem. | Charles C. Paine, | Beverly. |
| Moses Coleman, | Newburyport. | Joel R. Peabody, | Topsfield. |
| Joseph Cressy, | Beverly. | Nathaniel Porter, | Beverly. |
| Charles Davis, | " | John Porter, | Wenham. |
| Aaron Dodge, | " | John A. Putnam, | " |
| Elnathan Dodge, | " | Samuel C. Pitman, | Lynn. |
| William E. Dodge, | " | John G. Raymond, | Beverly. |
| Stephen Driver, | Salem. | William Rodgers, | " |
| J. M. Decker, | Ipswich. | Richard S. Rogers, | Salem. |
| Israel O. Edwards, | Beverly. | Nathaniel T. Safford, | Beverly. |
| Seth Friend, | " | Levi D. Shelden, | " |
| Joshua Foss, | Newbury. | Samuel D. G. Standley, | " |
| Jedediah Farnham, | Andover. | William Saunders, | Salem. |
| Josiah B. Gale, | Salisbury. | Samuel S. Standley, | " |
| John A. Green, | Beverly. | Edmund Smith, | Newbury. |
| John J. Gould, | Ipswich. | Farnham Spofford, | Andover. |
| Amos Gould, | Wenham. | Charles A. Stetson, | New York. |
| Franklin Haven, | Beverly. | John Smith, | Hamilton. |
| Daniel Hildreth, | " | Lawson Walker, | Beverly. |
| Moses Hill, | Marblehead. | Henry Wheatland, | Salem. |
| John Kinsman, | Salem. | Henry Whipple, | " |

# LIST OF PREMIUMS & GRATUITIES
## AWARDED IN 1850.

### PLOUGHING—DOUBLE TEAMS.

Horace Ware, Jr., Salem, first premium, - - $10 00
Jonathan Berry, Middleton, second premium, - - 8 00
Franklin Alley, Marblehead, third premium, - 6 00
Richard S. Bray, Newbury, fourth premium, - - 5 00
John S. Hubbard, Newbury, fifth premium, - 4 00

### PLOUGHING—SINGLE TEAMS.

Jackson H. Pickering, Danvers, first premium, - 8 00
Elijah Pope, Danvers, second premium, - - - 6 00
Daniel Putnam, Danvers, third premium, - - 4 00
William Foster, Andover, fourth premium, - - 2 00

### FAT CATTLE.

Jedediah Farnham, Andover, first premium, - 10 00
do do do second premium, - 8 00

### WORKING OXEN.

Richard S. Bray, Newbury, first premium, - - 10 00
John Washburn, Lynn, second premium, - - 8 00
Jona. Berry, Middleton, third premium, - - - 6 00
Isaac Standley, Beverly, fourth premium, - - 4 00

### STEERS—THREE YEARS OLD.

Jedediah H. Barker, Andover, first premium, - - 7 00
David S. Caldwell, Byfield, second premium, - 6 00

### STEERS—TWO YEARS OLD.

Moses Pettingil, Topsfield, second premium, - 4 00

### STEERS—ONE YEAR OLD,

Seth Kimball, Bradford, first premium, - - 4 00
David S. Caldwell, Byfield, second premium, - 3 00
James Day, Bradford, gratuity, - - - 2 00

BULLS.

J. G. Walcott, Danvers, first premium, - - - 7 00
Joseph Kittredge, Andover, second premium, - 6 00
David Lake, Topsfield, third premium, - - - 5 00

MILCH COWS.

Farnham Spofford, Andover, first premium, - 10 00
Stephen Driver, Salem, second premium, - - 9 00
Josiah Crosby, Andover, third premium, - - - 8 00
Eben. King, Danvers, fourth premium, - - 7 00

HEIFERS—IN MILK.

Philip L. Osborn, Danvers, first premium, - - 7 00
Daniel Osborn, Danvers, second premium, - 6 00
Henry Hone, Saugus, third premium, - - 5 00

HEIFERS—TWO YEARS OLD.

Sylvester Cummings, Danvers, first premium, - 5 00
Eben Hathorne, Salem, second premium, - - 4 00
John Stone, Jr., Marblehead, third premium, - 3 00

HEIFERS—ONE YEAR OLD.

John S. Hubbard, Newbury, first premium, - - 4 00
Jesse Dame, Beverly, second premium, - - 3 00
George French, Andover, third premium, - - 2 00

MARES AND COLTS.

Dean Robinson, W. Newbury, breeding mare, premium, 10 00
Joseph Kittredge, Andover, four year old colt, premium, 10 00
Ezra Dodge, Wenham, three year old colt, premium, 8 00
Israel Trask, Beverly, two year old colt, premium, 6 00
Moses L. Atkinson, Methuen, one year old colt, prem. 4 00

SWINE.

Seth Kimball, Bradford, boar, first premium, - 5 00
Josiah Crosby, Andover, boar, second premium, - 3 00
John Smith, Hamilton, breeding sow, first premium, 5 00
Wm. G. Lake, Topsfield, breeding sow, second prem. 3 00
John Smith, Hamilton, litter weaned pigs, first prem. 6 00
Allen W. Dodge, Hamilton, litter weaned pigs, 2d prem. 3 00
Abel Burnham, Gloucester, single pig, first premium, 4 00
Henry Poor, Andover, single pig, second premium, 2 00

SHEEP.

Joseph Kittredge, Andover, first premium, - - 7 00
Dean Robinson, West Newbury, second premium, 5 00

JUNE BUTTER.

Jona. Berry, Middleton, first premium, - - 10 00
Perley Goodale, Danvers, second premium, - - 8 00
John Preston, Danvers, third premium, - - 6 00

SEPTEMBER BUTTER.

Elijah Pope, Danvers, first premium, - - 10 00
Nathaniel Felton, Danvers, second premium, - 8 00
Warren Averill, Ipswich, third premium, - 6 00

HONEY.

Abraham Lord, Ipswich, first premium, - - 3 00
John F. Kimball, Boxford, second premium, - - 2 00

NEWLY INVENTED IMPLEMENTS.

David Stiles, Middleton, Eagle Hay Cutter, premium, 7 00
Stephen Granville, Danvers, Washing Machine, prem. 2 00

MANAGEMENT OF FARMS.

Appleton Moore, Amesbury, premium, - - 15 00
Henry Poor, Andover premium, - - - 10 00

RECLAIMED MEADOWS.

John Porter, Wenham, first premium, - - 20 00
Calvin Locke, Ipswich, seeond premium, - 15 00

GRAIN CROPS.

Henry Poor, Andover, premium, - - - 8 00
Adino Page, Danvers, premium, - - - - 8 00
Joshua Foss, Newbury, premium, - - - 8 00

ROOT CROPS.

Daniel Buxton, jr., Danvers, premium, - - 6 00
Benjamin Rodgers, Andover, premium, - - - 6 00
Lyman Mason, Beverly, - - - - - 6 00

ORCHARDS.

Amos Gould, Wenham, first preminm, - - 10 00
Lewis Allen, Danvers, second premium, - - 8 00
William G. Lake, Topsfield, third premium, - 4 00
Moses Pettingil, Topsfield, first premium, - - 10 00

AGRICULTURAL ESSAYS.

| | |
|---|---|
| Charles L. Flint, Cambridge, premium, - - | 10 00 |
| Ben. Perley Poore, West Newbury, premium, - | 10 00 |
| Allen W. Dodge, Hamilton, premium, - - | 10 00 |
| By the Committee on Poultry, - - - - - | 26 00 |
| " " " Fruits, - - - - | 36 75 |
| " " " Vegetables, - - - - | 17 50 |
| " " " Flowers, - - - | 10 00 |
| " " " Rugs, Carpets, and Counterpanes, | 32 25 |
| " " " Cloth and Hosiery, - - | 14 62 |
| " " " Metallic and Fancy Articles, | 26 00 |
| " " " Leather, and Articles therefrom, | 54 75 |
| Total, - - - - - - - - | $740 87 |

ALLEN W. DODGE, SECRETARY.

Hamilton, January 1851.

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☞ The list of premiums for 1851 will be found in the printed show bills. It is nearly similar to that of former years.

# LIBRARY.

The Library of the Society is kept at the City Hall, in Salem. The City Clerk, (Joseph Cloutman,) acts as the Librarian, and will deliver books under the following regulations:

1. Each member shall be entitled to take from the Library two volumes, on signing a receipt for the same, and agreeing to be accountable therefor.

2. No member shall keep any book more than two weeks, after being notified by the Librarian that the same is wanted by another member.

3. All books belonging to the Library, shall be returned on or before the 15th of November, in each year; that the same may be examined, and the condition of the Library reported to the Trustees.

4. Any member who shall neglect or refuse to conform to these regulations, shall forfeit the privilege of taking books from the Library.

NOTE. All who have paid the initiatory fee of three dollars, towards the funds of the society; all who have received certificates of membership by order of the Trustees; and all ordained ministers of the Gospel, resident within the county, are considered as members. Editors of newspapers published in the county, are also, by vote of the Society, entitled to the privileges of the Library.

---

## DONATIONS MADE TO THE LIBRARY IN 1850.

The Plough, Loom and Anvil, 6 Nos. Vol. 3.
American Agriculturalist, 6 Nos. 1850.
Johnston's Lectures on Scientific Agriculture.
Transactions of Michigan State Agricultural Society.
Dadd's Reformed Veterinary.
Leuchar's Treatise on Hot Houses.
} Presented by Editors of Salem Register.

Salem Gazette, for 1846—7—8 and 9, presented by its Editor.

Randall's Sheep Husbandry; Agricultural Addresses; and Harmony of Interests; presented by J. S. Skinner.

Magnetic and Meteorogical Observations, 3 Vols; California Message and Correspondence; presented by D. P. King.

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# BOOK, JOB AND FANCY

# PRINTING,

Executed at the Office of the

## "Salem Tri-Weekly Gazette,"

—AND—

## "ESSEX COUNTY MERCURY,"

**In the best Style and on the most favorable Terms.**

## The Salem Gazette,

*Established, Weekly*, 1768; *Semi-Weekly*, 1796; *Tri-Weekly*, 1847,

is printed on Tuesday and Friday mornings, and Saturday afternoons, at **Four Dollars a Year.** The length of time which it has been before the public, and the extensive circulation it has obtained for the larger part of a century, render it unnecessary here to enter into a formal exposition of its character. The intention is that it shall always contain the most important foreign and domestic intelligence, potitical, moral and literary; original communications upon all subjects connected with the public welfare; a full and correct shipping list; business advertisements; and, in short, everything that is usually found and expected in a Family Newspaper.

The large country circulation of the Gazette, (including the Mercury, in which all new advertisements of the Gazette are published,) renders it particularly valuable as a medium for the publication of Probate advertisements, sales of Real Estate, and other notices of interest to the farming population.

## The Essex County Mercury,

—OR—

## Weekly Salem Gazette,

*Established A. D.* 1832,

is made up from the reading matter of the Salem Gazette, and is one of the largest and cheapest papers in New England. The subscription price is **One Dollar and Fifty Cents a Year,** when paid in advance. The quantity of reading afforded is much greater than is usually found in a Newspaper; and, as it circulates extensively in all parts of the county of Essex, particular pains are taken to present all the local matters of the County. The Mercury is published every Wednesday morning; the price, when not paid in advance, is *Two Dollars a Year*, payable semi-annually.

## No. 191, Essex Street.

Opposite the "Mansion House Hotel."

FARMERS'

# Agricultural Warehouse

—AND—

# SEED STORE.

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which obtained the FOUR FIRST PREMIUMS, at the late STATE FAIR, in N. York, in a competition open to the whole country. Also,

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☞ The Magazine is published monthly, forty-eight pages each, making an annual volume of 600 pages, at the low price of *ten dollars* a year, in advance.

—ALSO—

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# TRANSACTIONS

OF THE

# ESSEX AGRICULTURAL SOCIETY,

FOR

## 1851.

PUBLISHED BY ORDER OF THE SOCIETY,
DECEMBER, 1851.

SALEM:
PRINTED AT THE SALEM GAZETTE OFFICE.
1851.

# BOOK, JOB AND FANCY

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Executed at the Office of the

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## THE CHEAPEST FAMILY NEWSPAPER.

### The Essex County Mercury,

(*Published on Wednesdays,*)

with which the Danvers Courier was united in September, 1849, is made up from the reading matter of the Salem Gazette, and contains at least double the usual quantity of reading, given in the County newspapers of the State. It being our aim to give the Mercury a very decided local character, we would earnestly solicit from our friends, in the various towns in the county, communications containing maritime, literary, educational, religious, and other intelligence;—and we hope that all who consider it important to sustain a County newspaper, will aid in giving to it an increased circulation.

The subscription price is **one dollar and fifty cents a year,** when paid in advance; or, **$2 00** a year, payable semi-annually.

**NO. 191, ESSEX ST., SALEM.**

Opposite the "Mansion House Hotel."

# TRANSACTIONS

OF

# THE ESSEX

# AGRICULTURAL SOCIETY,

FOR 1851.

PUBLISHED BY ORDER OF THE SOCIETY.

DECEMBER, 1851.

SALEM:

*Printed at office of Salem Gazette and Essex Co. Mercury.*

1851.

1852 Jan 31
Life of J. T. Proctor
1 Leaves

# ADDRESS.

## BY MILTON P. BRAMAN.

Mr. Colman observes "that to no profession has Agriculture been more indebted for its improvement" than to that of the "clergymen." A fact of which I was quite unaware, until I saw the remark in one of his valuable publications, and which my sympathies would sufficiently incline me to accept without much examination, even if the truth of it were supported by less unquestionable authority. His extensive acquaintance with the subject of Agriculture, afforded him the means of forming a very correct opinion of the proportions in which the professions have contributed to advance its interests; and making all due allowance for partiality to the employment upon which were expended the energies and enthusiasm of his early years, I suppose his testimony will be allowed to be as just, as it is honorable, to that class upon whom he has bestowed his commendation. How large a share of the tribute was designed for the clergy of New England, or Massachusetts, or Essex County, has not been told us.

I am aware of the fact, that, in the early periods of our history, the customs of the times in the rural towns made it as much a part of the ministerial profession to cultivate a farm as to oversee the flock. Its members were hardly considered as completely furnished for their vocation until they had added a few acres of ground to their spiritual gifts and theological attainments. Upon the production of their own cultivated fields, they depended in part for their maintenance, and for ability to extend accommodations to those travelling brethren, who, considering economy as one of the christian virtues, sought refreshments for the outer man, and the beast, from the larder

and stable of those who remembered the injunction not to be forgetful of strangers; and who, though encouraged to hope that they might sometimes be visited by angels unawares, never were so fortunate as to meet with those who could be satisfied with angels' food.

But how much they contributed to improve the art of agriculture, by examples of superior tillage, was never to my mind a clearly established point. For while they could not be denied the claim of inculcating the doctrines of the new revelation of christianity, they seemed to adhere with a kind of Jewish pertinacity to the old testament dispensation of farming.

However, though this opinion may not want a considerable support from facts in the case, there may be more in the profession of theology in New England, than have come within my knowledge, who unite as Mr. Colman did, while he remained in the pastoral office, a skillful culture of the soil with the duties of their clerical vocation; and who, like him, have employed the seasons of relaxation from their peculiar studies, in pursuing inquiries and experiments that have thrown light upon the principles of that art, whose progress they have the strongest reasons for contemplating with delight. You will allow me to say, to prevent all misconstruction, of the position which I have ventured to occupy, and as an apology for the absence of those practical suggestions, which you are accustomed to receive on these annual occasions, that I must disclaim any personal share in the eulogium which your deceased coadjutor pronounced on the clergy. I am only a farmer ex officio; hold a few acres of parsonage by a clerical tenure, subject to be dissolved at six months notice from the landlords. A mode of tenure, which, though not discussed by Lord Littleton or Coke, and not very familiar in the courts of law, is well known to the community to have its full share of terrestrial uncertainty. Such a relation to the soil holds out no great encouragement to a very vigorous and faithful cultivation, even if there be taste, and skill, and time, and resources enough, to ensure it under more propitious circumstances. Needing therefore, rather to be instructed myself, than being able to offer any hints as to the improvements of that art to

whose interests your association is devoted, I shall direct my remarks to those aspects of the subject which are of a more general character. I propose to consider in the first place, some of the obstacles which have retarded the progress of agriculture in the world.

I. The oppressed condition of many who have cultivated the soil.

Despotic governments have laid some of the heaviest burdens, with which they have afflicted mankind, on the tillers of the ground. By the enormous taxation which they have wrung out of the hard earned fruits of their toil, the feeling of insecurity which they have inspired with respect to the enjoyment of their acquisitions, they have repressed enterprise, unnerved the sinews of industry, and discouraged attempts at improvement. Agriculture is the oldest of all arts, its existence is coeval with the race; it commenced in the garden of innocence, and has engaged the uninterrupted attention of mankind in the Eastern world for 6000 years. It has drawn towards itself a larger portion of human toil, and employed a greater variety of talent and observation than any other occupation of life. It had its origin in a part of the world favorable to its cultivation, and from its first date, has been diffused over regions that have enjoyed some of the most fruitful soils and genial skies that are to be found upon the globe. But it is in those very climates that arbitrary power has exerted its most unmitigated and cruel sway, and laid its iron hand upon the right arm of agricultural toil. Egypt is among the most ancient countries of the East. It possesses a soil of amazing fertility, and a climate that admits of uninterrupted vegetation. The Hebrew scriptures give us a sufficiently clear specimen of the dreadful severity of its government, at one remote period of its history; and when we consider the information which Herodotus has furnished, that the soldiers and the priests were the only classes which were honorably distinguished, and those stupendous works of art, some of which remain to this day, the wonder of mankind, and the fabrication of which must have demanded the forced labor of so many thousands of people for successive years, we can im-

agine the heavy exactions to which the cultivators of the field were subjected. On one of the roads which an ancient prince caused to be made, of no public utility, the historian informs us was expended the labor of a hundred thousand men for ten years; dragged from their homes and fields, doubtless, by the iron mandate of the rulers, who employed them as so many beasts of burden, to perform the task for which, like them, they received just food and care enough to give them vigor for their work. It is the general opinion that the immense pyramids, and other works of correspondent magnitude, which distinguish that ancient land, are so many mighty monuments of those crushing burdens, which, in the shape of labor and taxation, fell with their greatest weight on the agricultural class of the people, These vast fabrics are at once the glory and shame of the nation, and proclaim to this distant generation the wrongs of oppressed humanity.

With the condition of modern Egypt, travellers have made us fully acquainted. The Nile pours out the same annual bounty with which it has enriched the land for thousands of years. The sun shines as brightly upon the fields, as at any period since it began its circuit in the heavens. But no country presents a greater contrast between the beneficence of nature, and the devastating cruelty of man. The peasantry, we are told, are reduced to the lowest state of indigence and misery, and characterized by indolence, inefficiency, and improvidence. They are so pressed down by the rigor of a tyrannical government, that they have no spirits left to attempt more than the satisfaction of the merely animal necessities. In Upper Egypt not a twentieth part of the produce comes into the possession of the laborer. And in both parts of the country, the demands of the government are so exorbitant, and rapacious, their fields are so often ravaged by officers employed in collection of tribute, that the poor laborer is deprived of all resources and motives, to pursue any efficient cultivation of the ground. I have alluded to the oppressed condition of ancient Egypt before the kingdom came under the dominion of a foreign power. Since the date of its conquest, Niebuhr says that "this country," "whether under yoke of Persians, Greeks, Arabians,

or Turks, has been constantly oppressed by lieutenants of a distant lord; the sole object of both being that of extorting as large a revenue as possible from the hard hands of the peasant."

The origin of China is traced to a remote antiquity. It has enjoyed a great degree of internal tranquillity and freedom from foreign wars, possesses a very favorable climate and soil, and supports a vast population. Agrciulture is the principal employment. In some respects it receives particular attention and encouragement from the government. Its inhabitants are industrious, persevering, and frugal in their habits, and are accustomed to some agricultural practices of a superior character. Why has not the art so long practised, under so many circumstances favorable to its progress, reached a greater degree of perfection? The same nation to which is assigned the priority in the invention of the art of printing, and of the mariner's compass, use a plough of the rudest model. It is doubtful whether it has received any considerable improvement in its structure for 4000 years. It is so unlike the fine pattern to which American ingenuity has shaped this indispensable utensil, and seems so unfitted for useful work, that if it should happen to be found to day, among the articles for exhibition, without a label, its nature aud purpose would exercise the New England art of guessing as much as most problems that are submitted to the operation of that peculiar faculty. If any, or a part, of that ingenuity had been expended on the culture of the earth, which has been employed on some of those puzzling and useless trinkets which excite the wonder of other nations, the agriculture of the Chinese would have attained to a point far beyond its present state of advancement. For the slow progress which has been made, more than one reason could be assigned. The tyrannical exactions of the government are one. Staunton asserts that the mandarins make use of every possible effort to extort money from those under their control. It is the declaration of Barrow that, if a man, by any species of employment, has reached a condition of affluence, he is obliged to conceal the evidence of his condition, lest by exposure to the notice of the officer, to

whom he is immediately subject, some device would be resorted to, to confiscate his property. It is true that the abuses of power do not affect agriculturalists alone. Other classes are exposed to their unsparing severity. But when we consider that the great body of the people are devoted to tillage, that those addicted to this pursuit, are more distinguished for quiet and patient endurance than other classes, that through the equal partition of estates, most landholders are small proprietors, and destitute of the means of defence which great wealth often furnishes, we see that, to them, will fall the greatest share of the mischiefs of unrestrained authority.

Hindosthan is a still more impressive illustration of the disastrous effects of mis-government and arbitrary exactions on the interests of agriculture. The soil is productive, and throughout the larger portion of the peninsula, the warmth of the season is said to be sufficiently intense and continuous, to yield two, and sometimes three crops annually. The cultivation of the ground is in the most depressed state, and far behind that of some regions, which were in a state of barbarism when this ancient land had reached its present degree of civilization. The agriculturists have no adequate protection for their property. Their acquisitions are said to be subject to enormous extortions from the ruling powers, who under the form of collecting tribute to defray the public expenses, wrest from them the fruits of their industry, and crush them down in poverty and discouragement.

And what is the whole Turkish Empire but a specimen of a favored region of the earth, cursed by the despotism of the government, whose officers are like a stationary band of robbers, supporting and enriching themselves by the pillage of those over whom they exercise dominion?

A greater portion of the most ancient regions of the world, those upon which nature has lavished its munificence, is precisely that part upon which the tyranny of man has breathed its pestilential breath, and blasted with sterility and desolation.

2. Another form of oppression is that of slavery. It is contended by some writers that this institution in certain

states of society, operates advantageously to the interests of agriculture. When a colony takes possession of a new and extensive region of the earth, it is asserted that unless there is some mode by which proprietors can compel laborers into their service, it will be impossible to obtain an adequate supply. Abundance of land can be so cheaply obtained, and the desire of independence is so natural and strong, that each one aspires to become the owner of a plantation, instead of a laborer on hire. The consequence is, that the immigrants become widely dispersed, and separate from each other; each one being so isolated, and apart from the rest, is obliged to distribute his labor among a variety of employments, to furnish himself with the accommodations of life, and the culture of the soil receives very scanty and insufficient attention; added to this, they are separated asunder by so wide tracts, that highways and facilities of communication, so essential to the prosperous state of agricultural improvements, are wanting to connect the inhabitants, as in more dense settlements, together. The Virginia colony, and another established on the western coast of New Holland many years since, are referred to among the illustrations of this position. One of the principal individuals of the latter colony, who took with him from England a capital of 250,000 dollars, and three hundred laborers, was so completely deserted that he had not an assistant to make his bed or bring him water from the river. His capital wasted away for want of laborers to preserve and keep it in a productive condition.

But without controverting this view of the subject, it may be truly affirmed, that whatever peculiar and temporary circumstances may render slavery a source of agricultural improvement, it is, on the whole, a great obstacle to its rapid advance. It is one part of the temporal, righteous retribution, which the crime of slavery carries with it,—that it wastes the soil, and deteriotates the art on which it bestows its labors. No country furnishes a clearer illustration of the assertion than ancient Italy. In the later periods of the Roman republic, slavery had spread to a most enormous extent. There were probably twice as many slaves as freemen, and almost the

whole cultivation of the soil was performed by the hands of bondmen. Their number continued to increase, till, in the times of the Roman Emperors, the free citizens formed but a fourth part of the population. At one period, the whole of the peninsula, comprising an extent of one hundred and eighteen thousand square miles, was divided among 1760 proprietors, who employed slaves to cultivate their immense estates, while they, abandoning the oversight of the grounds, retreated within the walls of the capital, to riot in the luxuries of their vast accumulation. The consequence which followed, was, that the whole agriculture of the country suffered great decline. Some portions of its most luxuriant soil became wastes. The productions fell to more than half their former quantity. And the land so distinguished by fertility, and its beautiful summer sky, and which once supplied distant regions with its abundance, was obliged to draw its resources from the banks of the Nile.

The ancient Greeks entertained some very correct opinions respecting agriculture, and we have in the writings of distinguished authors, who employed their pens on the subject, some of the most judicious and well tested maxims for the practice of the art. For mental ability, and genius in its most diversified forms, their renown is diffused through the earth, and will be perpetuated to the latest time. But they regarded the culture of the earth as a menial employment, they thought it too degrading to engage the pursuits of free citizens, and worthy alone of slaves; and slaves performed accordingly, almost the whole labor of tillage. Hence we see one reason for the immense difference between the progress of agriculture, and that of some other arts in which they have displayed most consummate skill. They rendered themselves so distinguished for sculpture and architecture, that it is thought presumptuous to attempt to surpass them, and it is considered proof enough of the most exalted genius, and fame quite sufficient for any one, to approach their illustrious models. The Parthenon, and forms of Grecian statuary have been the wonder and study of all succeeding ages. The felicity of their design, the symmetry of their proportions, the exquisite finish and beauty with

which they were wrought into the expression of the brilliant thoughts which conceived them, have reflected a lustre upon this department of the genius of that marvellous people which no length of years will efface.

But their ill-fashioned and clumsy implements of agricultural labor, as represented on ancient monuments, resemble the rude products of barbarian skill. The most perfect form of the plough does not admit of such efforts of genius, as carved the statues of Minerva and Jupiter. But if some agricultural Phidias had bestowed a small part of that skill and industry on this most useful instrument which were devoted to those unrivalled specimens of art, more beneficial service had been rendered to Greece, than by all the beautiful monuments of taste, that were ever chiselled from the quarry. The effects of slavery on agriculture in the West Indies, and the slaveholding states of this union, are too notorious to require any particular detail. It was said nearly twenty years since by an able English writer, that the lands of the islands had become so completely exhausted, and worn out, that were it not for the protection which the English tariff afforded the West India sugar, the planter would be obliged to abandon the cultivation of the article; and that if slave trade had not been abolished, and the old system had continued of killing slaves by overwork, and replacing them by fresh importations from Africa, the superior profit would not then have counterbalanced the loss arising from the constantly deteriorating quality of the soil.

And the agriculture of the older slaveholding states of this union, is reaping the retributory effects of the pernicious system. The fertility of the ground cries out from under the withering culture; and if the progress of years should find that institution in unmitigated operation, the voice of accusation will cry out from the ground louder than that of the blood of murdered Abel; and time will have erected to it a monument of desolation upon every hill and valley within its borders.

In 1831, when the subject of slavery was discussed in the legislature of Virginia, it was publicly avowed that slavery was ruining Virginia. It was declared by a public writer at

that time, who was a Virginian, that a very great proportion of the larger plantations, stocked with from fifty to one hundred slaves, annually brought the proprietors in debt. At the end of a term of years, a very large proportion of the landholders are contented if they can just meet the expenses and save themselves from ruin; and those who make profit scarcely ever realize more than one, or one half per cent on the capital. Mr. Randolph said the time would come when the masters would run away from their slaves, and be advertised in the papers. There is no constitutional provision requiring masters held to the care or service of their slaves, to be returned when they escape; but if the framers had been thoughtful enough to insert one, there probably would not have been much objection to a law demanding the restoration of the fugitive to his bondage.

Under no circumstances does the blighting effect of slave toil on agriculture, more forcibly arrest attention, than when it is seen on the northern borders of the slaveholding states. Ohio and Kentucky are separated only by a river. The former was settled about nineteen years after the latter. They are of about equal size, and possess a soil of equal degrees of fertility. Ohio now contains almost one million nine hundred and eighty-two thousand inhabitants, while the population of Kentucky has reached only about half that number. And the difference between the aspects of the two states as they strike the eye of the observer in his passage upon the dividing water, is as great as if this water were not merely a river, separating two states, but an ocean intervening between two countries. In the cultivated and luxuriant farms of the one, as contrasted with the thriftless tillage of the other, the voice of Providence like a trumpet from heaven is pronouncing its anathema on slave labor. It is, as if the hills of Ohio should burst into song, and the "trees of the field" should "clap their hands," and the waving harvests should lift up one great shout of rejoicing that they are free from the curse of Kentucky.

A prosperous agriculture must breathe a free air, and be conducted by unmanacled hands. The Greeks thought agriculture unworthy of freemen. They should rather have thought

slaves unworthy of agriculture. When could the splendid structures of Athens have risen into their majestic proportions, if the art which erected them had been thought beneath the dignity and attention of a free citizen? What improvement could be expected of any art, which should be left exclusively to the exercise of those who were doomed to ignorance and degradation, and thrust down to the lowest place in society? And when forced labor is united with this debased condition, it finishes the description.

Now consider that for a long series of ages, almost the whole agriculture of the world was conducted by slaves. It was committed to the hands of those who occupied the very base of the social edifice. The noble employment was associated with ignorance, inferiority and wretchedness. Men have literally tilled the fields with the yoke upon the neck, and the chain upon the foot. It seemed as if science and skill, and every thing that ennobled character and art, and gave efficiency to labor, were driven out of the field by the structure of society and the general voice of mankind. And now that agriculture has risen into more consideration and dignity than it once enjoyed, and those, who, disdaining it as a low employment, turned their attention to what they deemed more honorable pursuits, are beginning to estimate it in its true character, what obstacles do the lords of slaves and serfs find in their attempts to produce a more efficient and improved tillage. The labor of the bondman is a heavy and slow service, wrung out from a most reluctant will. The most impulsive motive to vigorous industry is wanting, whose place no vigilance nor scourging can supply. You can command the winds and water and vapor to do you service, like instruments wielded by your own will and muscles. You can chisel wood, and mould iron like flexile straw, into as many shapes as there are forms of human thought conceiving products of utility and profit; but there is a power in the enslaved will, more uncontrollable than the elements of nature, and more inflexible than bars of iron, which baffles the ingenuity of man to subdue it to its purposes.

The heart of the slave not only lacks the main spring of in-

dustry, but his unintellectual mind is slow to admit new conceptions. The introduction of an improved machine encounters a mighty impediment from the refractory living machines that are required to work them. Perhaps some may recollect seeing a West India plough, a few years since, in one of the agricultural warehouses in Boston. It was so unlike anything else of this description which was ever made among us, that it is not easy to convey an idea of it by comparison. Indeed it was not made at all. It grew like a tree, for it seemed to have been once a forked branch, one prong of which served for a beam, and the other to scrape the ground; with a sprout or some other fixture in the trunk to enable it to be held. The planter on whose estate it was used, wished to substitute an improved structure. But the reluctance of the slave was so strong, and his awkwardness in the use so great, that the obstacles proved insurmountable. The plough and the holder were certainly adapted to each other. For the instrument was as much like a New England plough, as a West India slave was like a New England man. And what domestic servitude had so well joined together, the planter should not have attempted to put asunder.

3. To ensure a more rapid improvement in agriculture, the system of tenantry must be abolished, and the cultivator must be the owner of the soil. It is a just remark, made twenty years since, by a distinguished writer, that "hitherto the majority of mankind who have tilled the earth have been slaves or *tenants*." The system of tenantry in modern Europe grew out of Feudalism. When the Roman Empire fell before the incursions of the northern barbarians, the lands of the conquered were divided between the chieftains of the invading hordes, who became possessors of large tracts, the occupancy of which was granted to such as desired to cultivate them, for stipulated considerations. The great land owners were originally princes, who required military service from their dependents, as a part, or the whole of the condition upon which lands were held. The cultivators of the soil were the subjects, as well as the tenants of the large proprietors. The relation became modified by the progress of time, and the changes

which took place in the political state of the countries, where the system prevailed. But it was for a long period generally one of most grievous exaction and oppression on the part of those who had power to fix the terms. The condition of the tenants was but a little improvement on that of slavery and serfdom. Among the causes which prepared the way for the first French revolution, are reckoned the immense burdens imposed upon the peasantry. The landholders, having no taste for rural life and agricultural pursuits, repaired to the capital for purposes of luxury and ambition. They regarded the cultivators of their fields as an inferior class of beings, whose business it was to labor for the subsistence and pleasure of those above them. They subjected them the most severe restrictions and extortions. The game laws were a most tyrannical and destructive interference with agricultural labors. In France such animals as deers and wild boars were suffered to rove at their pleasure, and lay waste the fields of the tenants, just to afford an opportunity to the higher classes for indulgence in the exercise of hunting. The nobility and gentry had a taste for partridges. Hence the farming processes must be conducted with reference to its gratification. Mowing the grass must be suspended till the eggs of the bird were hatched. Destroying the weeds was interdicted until the young partridges were out of danger from the hoe—and stubble must be carefully preserved, to afford them a shelter from the weather; and no kind of manure was allowed to fertilize the soil, that was thought injurious to their flavor. So that it would seem in one point of view, to have been a prevalent idea at that time, that the chief end of the world and man was the partridge. The grass grew to protect the eggs, and the weeds sprang up as a covert for the young, and the stubble was designed as a shelter from inclement weather, and all the lower classes were to conduct their toils with reference to its preservation, and gentlemen were made to eat it. So far as the agricultural laborer was concerned, France had made some progress. The first measure was to make him a slave and thing; the next was to raise him into a tenant and place him a little lower than a partridge. The ruling orders found to

their cost that to infuse such notions in the head of the peasant, was a dangerous experiment on his democracy, for he began to have still higher aspirations. The revolution followed, and the oppressed toilsmen had the audacious insolence to claim the full attributes and rights of humanity.

Other impositions were made on the cultivators, of a most aggravated character. The expense of maintaining the highways was so great as entirely to exhaust the resources of great numbers of them, and reduce them to want; and the whole mass of restrictions, and interference and exactions in various forms, was so great as to discourage industry, repress hope, and throw insurmountable obstacles in the way of all agricultural progress.

The system of tenantry in Great Britain is as favorable to the interests of the farmer as in any part of Europe. The influence of freedom, humanity and religion, has been felt upon this branch of her institutions as well as on all others; and although the art of agriculture has made rapid advance in later times, and been carried to a high point of improvement, it is yet, probably, far behind what it would have reached if its exercise had been united with an independent occupancy of the soil.

It was the opinion of Adam Smith, expressed long since, that whatever addition was made to the value of an estate, either by the progress of time, or changes in the condition of property, or the exertion of the tenant himself, accrued wholly to the owner of the land; and that no part of it was shared by the tenants. He declares that "the tenant gets the smallest share with which he can possibly content himself without being a loser; and the landlord seldom means to leave him any more." What prospect is there under such circumstances for improved cultivation? It is certainly for the interest of the occupant to so adapt his labors as to obtain only what products can be derived from the soil, without adding to it any permanent value. Those large and prospective plans that wait for distant returns—those new modes of culture which involve a great outlay of expense, and depend on the slow products of many years for remuneration, are not to be

expected from those whose interest in the soil will be terminated in a comparatively short period. Unless the proprietors themselves embark in these extensive schemes of improvement, they will not be undertaken. But there are too many whose taste inclines them in a different direction, and they expend in luxuries, and equipage, and the fine arts and splendid architecture, that revenue which might receive a vastly more useful application in adding to the productiveness of their landed possessions. The landlords of Ireland desert their estates, and they are found rioting in the indulgences of the splendid capitals of Europe. Foreign artists and tradesmen and servants receive the profits of that expenditure which might add a deeper hue to the green fields of their own country, and make unhappy Ireland a paradise of humanity, as it is now a paradise of nature. It must be conceded that in England and Scotland, within later periods, the great landholders are turning their attention in this direction; and their vast and splendid schemes of improvements are on a scale commensurate with the extent of their possessions, and worthy of the grandeur of the renowned empire which they inhabit. But it is an illustration of the truth of the general proposition, that agriculture can only make its highest advances from the efforts of those in whom ownership and immediate occupancy are united. Long leases, it is true, furnish some encouragement to the tenants for partial efforts to increase the permanent fertility of the soil; and they might be extended through so long a period, and embrace so many generations as to amount in the effects to independent ownership. But such leases as proprietors would be willing to grant, are not long enough to produce any such beneficial results. De Tocqueville says that one of the effects of democratic institutions is to shorten the term of leases; and he give a profound and apparently just reason for it, that in "ages of equality the prevailing notion is that nothing abides, and man is haunted by the thought of mutability, and that under this impression not only the landlords, but tenants, are averse to protracted terms of obligation, they are afraid of being tied up to-morrow by the contract which benefits them to-day." Now the spirit of democracy, in its large and true sense is constant-

ly on the advance; I say the *true spirit*, and not every developement of feeling that takes that name. Some forms of democracy, so miscalled, do not intend to be tied up to any thing that happens to thwart the inclination of their abettors. The day then seems to be passed of such long periods of leases as were prevalent in the middle ages; and if De Tocqueville has rightly conceived of the nature and tendency of the democratic spirit, the present comparatively contracted terms for which they are given, will experience still farther reduction. They must therefore be swept away before agriculture shall reach that point of excellence and perfection, towards which the brilliant career upon which it has entered seems to be pointing. Every tiller of the soil must have the feeling that every particle of energy and productiveness and science, which he adds to the permanent value of his grounds, will be wholly his while he lives, and descend to the objects of his regard when he dies; or else the investigations of science, the contributions of experience, the motives of interest and affection will be shorn of much of their power to call out the highest resources of his strength and ingenuity. There are connected in England with the institution of tenantry, the laws of primogeniture and entail, and the multiplied legal embarrassments which attend the conveyance of land from one proprietor to another. The object of this legislation is political, to uphold an influential and powerful aristocracy. The oldest son inherits the whole landed estate as a matter of course, and the possessor is protected against alienation by entails, and other safeguards, whilst the brothers find places in the army, navy, and the church. The effect is, that many persons whom nature designed for excellent agriculturists, are drawn into other pursuits, and those who would acquire renown on the deck, or in the camp, are consigned to obscurity on the paternal acres. The admiral oversees a plantation, and the farmer commands the squadron, or to vary the illustration we see another displacement which has sometimes been observed among us. The priest occupies the land, and the farmer the pulpit. We have all known men in the ministry among us, who, if they cultivated their parishes with as much suc-

cess as they do their farms, would be very apostles; and who, if they made their sermons cut as keenly as some of their farming utensils, would teach their hearers that it was more comfortable to sleep at home than in the pews.

Some European writers imagine that if the laws allowed of an equal partition of estates, and land were thrown fully into the market, to be purchased as easily, and in convenient parcels as any other commodities, it would in time, be reduced to such extreme sub-divisions as not to be capable of affording subsistence to the occupant. All, according to their theory, which interposes between us and the miserable poverty of Ireland, is the immense quantity of public lands which supply the demands of the rapidly increasing population. They ought to look charitably on the annexation spirit then. If the only alternative is annexation, or potatoes and starvation, the yankee will have no delicacy about manifesting decided preferences. It is well known that a large proportion of the population of France are landed proprietors, and that for many years the principle has prevailed of an equal division of the paternal farm among the children. In 1824, the Edinburgh Review predicted that if that system should continue in vigorous operation for another half century, the grand nation would certainly be the greatest pauper nation in Europe, and would with Ireland have the honor of furnishing hewers of wood, and drawers of water, for all the other countries in the world. Twenty-seven years of that half century have elapsed, and the supposed disastrous system has continued, in uninterrupted operation; and what are the facts? The reviewer has proved a false prophet. The amount of cultivable land is said not to have materially increased. A considerable accession has been made to population, and yet the people are abundantly richer in the necessaries and comfort of life, then when the terrible sentence of poverty was pronounced from the Edinburgh Tribunal. The landed proprietors of the united kingdom, do not exceed thirty thousand, which allows the average of more than twenty-three hundred acres to each individual. If, by the slow and safe operation of that spirit which is now working out the redemption of the old world, these large territories

could be divided into farms of a moderate size, and cultivated by the lords of the soil, might we not predict that their rapidly advancing agriculture would take still more swift steps towards the goal of its perfection.

4. Another circumstance which has retarded the advance of agriculture has been a want of chemical knowledge. It is only about a hundred years since the foundation of the science of modern chemistry was laid by Dr. Black of Edinburgh. Previous to that time this branch of natural philosophy, was in no condition to render any service to the tillage of the ground. And indeed it was not till a considerable period subsequent that application was made of its newly discovered principles to that art in which it is destined to effect so wonderful a revolution. Within fifty years the science has assumed an exactness and made a progress, and taken a prominence, to which nothing in its previous history, bears any comparison, and upon which are founded the highest expectations of its future development, and the immense benefit which it will confer on mankind. Probably no important interest of humanity will receive greater advantage from this department of research then agriculture. The composition of soils, the elements which are combined in vegetables, the requisite ingredients for fertilizing agents, the presence or deficiency of particular qualities in the earths, which rendered them adapted or unadapted to the production of certain descriptions of plants, and whose very existence was unknown for thousands of years, seem so essential to a successful tillage, that it is a matter of wonder how observation was so well able to remedy the want which chemical investigation is destined to supply. It has already rendered vast benefit to the cultivation of the earth; and yet agricultural chemistry is still in its infancy. It is just laying the foundations of a mighty superstructure. What then will it not effect when it has advanced to the full maturity of improvement? A hundred or fifty years more of progress with the increased activity of the human mind, and the increased facilities for discovery proportionate to that which the last century or half century, has witnessed, will renovate

the face of the earth, and produce results which would now seem almost like the effects of supernatural power.

The contempt with which some interested in the progress of agriculture, and possessing intelligence, look upon the pretensions of chemistry as an assistant to the farmer is quite astonishing. There is not a single process of vegetation that does not involve chemical laws and principles. The soil and the atmosphere are a great laboratory in which nature is constantly performing changes that professors of the chemical art are endeavoring to imitate by those experiments, in which the laws of science are attempted to be set forth to their pupils. Until a person can prove that the agriculturist has no occasion to ascertain the elements and qualities of the soil which he cultivates, or the ingredients which enter into the structure of the plants he rears, or the nature of those processes by which the elements contribute to the growth of vegetation, he cannot prove that chemical science is not a most valuable assistant in the art of tilling the ground. Why, all the practical knowledge which centuries of observations have collected on the modes of tillage, is the embodiment of so many facts in agricultural chemistry, upon which farther investivation in the science has thrown explanation. Chemistry as applied to this art is a collection of facts and explanation, which are themselves only additional facts, relating the best methods of securing the greatest quantity of the most perfect products from grounds of a certain quantity and quality, and it is nothing after all, but an increase of that very kind of knowledge, without which a farmer could not perform a single operation in the line of his employment. Is any man frightened at this? then let him take his place among the astrologers and star-gazers, and regulate his tillage by the almanack and the moon.

5. The situation and employment of the farmer have not hitherto furnished him with that stimulus to mental activity and effort, which has been applied to many other classes. Agricultural operations are so simple as to require no great exercise of ingenuity and length of practice to learn to perform them. The spade, the plough, the scythe, the sickle, demand no long apprenticeship, little teaching and a small degree of

dexterity to acquire a competent use of them. The modes and seasons of planting, sowing, raering, gathering, when once ascertained, can be comprehended in a very short time by the most moderate capacity. Every boy in rural places learns the current practice without any effort of attention, or direct teaching, by observing what he cannot avoid seeing, and as a matter of course, just as he acquires the knowledge of trees and stones, and earth and water, and the obvious effects of sun and rain, and the most common objects and processes about him. Strength of muscle and bone, and the power of hardy endurance, are more essential for the ordinary processes of farm labor, than natural ingenuity or skillful training. But the case is quite different with respect to the mechanic arts, some of which demand the assiduous and well instructed preparation of years to acquire the power to produce the most ordinary and usable fabrics which it is their appropriate business to furnish to the community. What a difference between the mechanical ingenuity, necessary to frame a dwelling house, and that required to prepare the ground for planting. When superiority of mental and manual pliability is employed on the construction of a watch over that bestowed on the use of the spade and the sickle. Those wooden clocks which New England pedlars sell in Nova Scotia, and which need one hand, and a crank to turn the wheels, are specimens of workmanship, which exhibits the results of a much more lengthend and devoted preparation, than the use of any implement of agriculture whatever. There is scarce any branch of mechanic art, or of manufacture. the training and practice of which do not necessarily call into action more of the mental attributes of man than the common operations of the field. Now the exercise of the intellect in one direction gives strength to all the powers. The discipline of the understanding in any form adds to its general tone, elasticity and extent; and thus the employment of those engaged in the mechanic arts, has given them an advantage over those who are occupied in the more simple labors or rural industry. When we consider the difference in the nature and mental influence of these two classes of pursuits, we see some reason for the opinion which has

gained prevalence, that, those who bestow their attention exclusively upon soil, are less active in their intellectual habits, less inquisitive, have less aptitude for making improvements, or adopting those suggested by other, than those who have devoted themselves to other branches of manual labor.

There are some kinds of manufactures that exert the same influence in a more indirect form. The powers that move them, render their operations exceedingly rapid and exciting. The incessant whirl and noise of the machinery, the quick movement on the part of those who exercise superintendance to supply the material for process, and regulate the work, the close attention demanded, the regularity and precision, and despatch with which every part of the fabric is elaborated and brought into shape, communicate corresponding impressions to the mind. The ideas of operatives are moulded by the processes about them, and acquire an energy, order and quickness which give a new cast to the intellectual character. Agricultural operations are generally of a slow and quiet nature. They do not admit of the application of that extensive, complicated and rapidly moving machinery, which is made use of in the manufacturing arts. The force of steam is said to have been, in some instances, made use of to move the plough, but then the celerity with which it is drawn through the furrows, must be limited by the power of speed in the person who follows; unless an apparatus should be invented which should sustain and guide itself, or admit of being directed by a person to whom it should at the same time, serve as a conveyance, the use of this wonderful agent, for such purposes is of questionable practicability; and even then, it could be employed only in those smooth and clear soils, where no fast stones and other impediments exist, to render a rapid progress destructive to the implement.

Now the mental habits of the farm laborer, take, where no counteracting circumstances exist, the cast of his employment. The slow manner in which it is conducted, and its unexciting nature exercises an assimilating influence upon his temperament. The ox has little elasticity in his movements. The farm horse has a reputation for spirit, certainly

not high. The processes of vegetation are so gradual as to make growth imperceptible, so silent that they emit no sound to the acutest ear. How different in their character and effects on those with whose pursuits they are connected, from the waterfall and the propelling wind, and the steam engine, and the swift revolving wheels, and the whirling spindles, and the unceasing din which turn the very brain into a locomotive, and strain the nerves to as high a tension, as the thread is twisted into strong and tenacious fibre, from the loose filaments of cotton.

There is a difference between agriculture and some other employments, derived from the diverse situation in which they are pursued. A large portion of manufacturing operations, is conducted in places of compact population, where men living in close connection, act powerfully on each other's sympathies, and those principles of imitation and emulation, which hold such sway in the human breast, and impart such great energy to intellect and character. These observations have a close application to trading and mercantile pursuits. They are necessarily carried on to a great extent in large and crowded places, where human passions communicate themselves with great rapidity; where enterprise, and skill, and talent are awakened into vigor by contact, and stimulated by the keenest competition of selfishness. The trading establishments in small villages, and rural districts, bring their superintendants into constant communication with men of all varieties of disposition and intelligence, from places more or less remote; where subjects are discussed, ideas are exchanged, information communicated, and the mind is kept in a state of excitement and activity.

The political affairs of the nation are discussed in these places of village resort, with more good sense than they are sometimes treated in higher places, and the business which it has taken a whole session of Congress to discuss, and another to decide, is there completed in one evening's debate, quite as well in some cases, if not so authoritatively as in the spot where the supreme power of the nation resides.

But the operations of husbandry require an open space, are conducted in a more sparsely settled region, without the limits

of those centres of congregation, and human contact and competition, and those influences which quicken ideas and rouse the energies to action.

6. A good deal of talent and energy are withdrawn from agricultural employment into other business, which holds out inducement of quicker and larger profit. The difference which exists between agricultural and mercantile occupations, is generally conceded to be this, that while the former holds out prospects of steady, safe, but slow and moderate returns, the latter invite by the chances of sudden and splendid fortunes, united with a very large proportion of entire failures. Now it would be the dictate of true wisdom to prefer generally the safer and less brilliant path to that which proposes a few magnificent prizes, and an immense number of blanks. There are, it is true, those who possess such a strong aptitude for mercantile life, whose genius for trading speculations is so remarkably developed, and who have such a great confidence in their powers, that their course of life seems to be pointed out by indications too plain to be mistaken; and the probability of success preponderates manifestly in their favor. But considering the monitory disclosures which have been made on this subject, the larger portion of those who embark in the pursuits of trade are mere adventurers. They hazard their fortunes on the most uncertain risks. The experiment which they make is like the purchase of a ticket in the lottery; it is worse than that even, it is a California speculation.

A magnificent prize in a lottery, a successful adventure for gold in the mining regions, will awaken the aspiration of thousands; they shut their eyes to the vast number of the disappointed, and are overpowered and seduced by one of the few instances of good fortune. So the comparatively few, who, resorting in early life to the cities for trading purposes, make their way up to the golden summits of ambition, will draw after them a crowd of the young, ardent, and ambitious, who abandon the less perilous and less fascinating toils of rural life, to plunge into mercantile uncertainties in which so many are overwhelmed to rise no more.

The attractions of a city life are motives of powerful opera-

tion with many, whose tastes lead them in that direction. They have no fondness for rural scenes. The green fields, the winding streams, the waving trees, the flowers of spring, hill and dale, and all the majesty and beauty of nature, have no charms in their eyes equal to the crowded streets, and buildings of lofty and costly proportions, and glow, and bustle, and gaiety, and splendor and fashion, and social enjoyments of a populous city.

The wish to escape the manual labor of the field is a strong passion. Work *there*, *is* work; it is disagreeable on account of its severity, its uncleanliness, its exposure to the sun and air, and those various influences which are inconsistent with the desired grace, niceness and delicacy of personal appearance. There are many young men who have feminine propensities. They have that inclination for the pretty, ornamental, and showy in person and dress, which nature intended should be the exclusive property of the other sex. They interfere with the female prerogatives, as much as some of those whose domain they invade, do in their aspirations after a more gentlemanly appearance. Since the ladies have begun to wear working jackets and pantaloons, and have exchanged the bonnet for the hat, I am greatly in hopes, as the only advantage which is likely to grow out of such a metamorphosis, that those young men who have such pretty tastes will permit them to take a more rational direction, and that in their endeavors to imitate the ladies, they will become as *manly* as they are.

Agricultural labor has not, in the view of some, the requisite dignity and rank to satisfy their ambition. The fact that the mere practical operations of farming demand so little training and skill to conduct them, places the occupation in a lower grade than the arts which require long apprenticeship, and much tuition to practise them, with the necessary degree of success and profit. The skill associated with the exercise of the craft gives it higher association and a loftier position. When, as in some mechanical employments, you have great expenditure in preparation, fine and costly material, extreme nicety of workmanship, and rich and valuable products destined for ornament and elegant use, you see an employment

which presents much higher attractions to those who are actuated by aspiring views, than belong to the more simple and rural exercises. The young man who enters upon such a line of life feels himself above the rustic laborer; as much superior in some of the finer attributes of humanity, to him who delves in the ground, as the instruments with which he works, surpass in their exquisite and delicate structure, the heavy plough; and the gold and silver which are wrought into forms of convenience and beauty by his hand, exceed the coarse earth beneath his feet.

There is no country on the earth where this ambition to rise to higher grades in life, real or imaginary, is more strong than in ours. The people seem to have the same convictions respecting their own properties that Moloch expressed of his compeers in Pandemonium, that "in their proper motion ascend."

Every man feels that he is equal to every other, and that nature has provided for him some high position which it is the great mission of his life to find, and that no American has found his right place, as long as there is another individual above him. Agriculture pays the penalty of this universal and boundless competition. A great amount of ingenuity, activity and enterprise, which ought to bestow their benefits upon the soil, are forced into other channels of industry which promise higher rewards to the impatient aspirations of the American mind.

7. Another reason for the slow progress of agriculture, in this country particularly, is the immense quantity of uncultivated and fertile lands which have held out constant invitation to emigrants from the older settlements. This cause has been more or less in operation in every region since the world began. For when the human race commenced its existence on the earth it was as large as it is now. They were a few individuals amidst a boundless expanse of territory, from which they were free to select places for location and culture, in any accessible quarter. When the native riches of the soil were exhausted by this simple husbandry in one spot, there were contiguous grounds with their fresh and unworn mould, and yielding their almost spontaneous products to the new colony,

and bordering on the frontiers of the ever widening circle of population, there stretched out tracts of untrodden earth to which there seemed to be no limitation. At length the progressive race had diffused themselves with more or less density to the limits of the eastern hemisphere, when a new world in the west emerged from the concealment of ages, inhabited indeed by human beings, some portions of which had reached that point of civilization, at which they drew most of their sustenance from the cultivated earth, but over a large part of which the savage plucked spontaneous fruit, and hunted his prey for food. Necessity is the mother of invention in agriculture, as well as in all departments of exertion. But this necessity has been greatly diminished by the extent of cultivable earth. Soils that required comparatively little artificial labor to give them productive energy have invited an easy and indolent culture. There are some parts of the earth where perpetual summer and luxuriant soil have made agriculture a useless labor. Bread grows on trees that spring up without planting. The inhabitants have only to receive it as it falls into their hands. They find a table of delicious food always spread out in the refreshing shade of their branches. Men do not eat bread in the sweat of the face. The original sentence upon the ground takes a new form, and the earth is cursed with spontaneous fecundity.

Where men can obtain a sustenance without effort, the soil will receive little or no benefit from human industry. The Olive tree, in those countries where it is produced, has been found to retard agriculture. The fruit is an article of healthful and nutritious food, which is yielded in great quantities. It springs out of a stony and barren soil, and those spots upon which nothing else that is useful will grow, will furnish this source of food in luxuriant abundance. In some of the Italian states, the deplorable indolence of the people, and inefficient culture of the earth, have attracted the particular notice of travellers. The Olive tree supplies the demands of the appetite, the inhabitants pluck its fruit and abandon themselves to leisure and repose.

We have no such gift of nature as this, to supersede the

necessity of field toil. But the vast tracts of cheap and fertile lands in the west, have interfered as really with agricultural progress, as though human sustenance were borne to our dwellings on the wind, and fell upon the earth like manna from heaven. The hard and sterile soil of New England was not made to yield sustenance without much cultivation. Its agriculture demands close attention, and inventive resources, and such is the mental activity existing here, that if the locomotive inhabitant were necessitated to confine the energies of his mind to the bounds of his native borders, it is not easy to imagine the new face that might be impressed on the landscape. Swift says that the inhabitants of Laputa invented a process of extracting sunbeams from cucumbers. It was certainly a very important discovery for a cold climate. Upon what authority this declaration was made, does not appear. The statement is corroborated by no other writer. But whatever the inhabitants of Laputa could do, I am certain that the natives of New England could equal them. And if sunbeams could be drawn from any other source than the sun itself, the yankee pedlars would set up an opposition to that luminary and offer a manufactured article for sale in the winter.

But the boundless fields of cheap lands present invariable temptations to emigration. The stimulants to a more inventive and vigorous agriculture are withdrawn. It is found easier for a person who has a taste for the labors of the field, to go a thousand miles and reap an almost spontaneous harvest from soils that have been growing richer since creation, than to turn the stone of the New England hills into bread. And then as larger proportions of waste land have been brought into culture, and the facilities of transportation have been multiplied, and a greater quantity of surplus products has been thrown into our markets to compete with those of domestic culture, every year has laid a still heavier tax on the ingenuity and exertions of the agiculturists in the older regions to extract an adequate return from mould of stubborn and ungrateful qualities. This demand in other circumstances would have operated favorably, it would have called forth correspondent effort, it would have developed resources equal to the

crisis, and though no more sunbeams might have been obtained to warm the earth, than the sun is pleased to dispense, they might have been put to more economical and efficient use in perfecting the process of vegetation.

But to those having the migratory propensities so strongly infixed in the minds of the American people, the possession of new and rich soils, presents irresistible attractions. It is to no purpose to attempt to dissuade them from their enterprise, by an exhibition of its difficulties and privations. They find it more easy to surmount them, than to call into existence the skill and resources necessary to obtain such a livelihood and position as they are ambitious to obtain here. When a person is told that with the same effort he can arrive at as good a condition in Connecticut and Massachusetts, as on the western frontier, it does not satisfy him. He acts on the maxim of Cæsar, that it is better to be the first man in a village, than the second in Rome, He is willing to live in a log house where his neighbor lives in a log house too. But to occupy such a dwelling, where others dwell in framed and ceiled houses, offends his notion of republican equality. We must be reconciled to such a state of things. The feeling, though it may be extravagant and misdirected, is the legitimate offspring of our institutions. It is a feeling which tends to elevation and respectability of character, it prompts to self-denying efforts, it is a preservative from degrading vice, and one of the great safeguards of that sense of dignity and the virtuous self-control, which belong to the foundations of American liberty.

I have thus mentioned some of the obstacles which have impeded the agricultural progress, and the list, if time permitted, might be enlarged. But there are signs of encouragement and advance.

I. The attention of the most enlightened nations is strongly directed to an improved cultivation of the earth. The governments, which were once so bent on enlarging their territories by new acquisitions are wielding their power more for the fertilization of that which they possess. The energies which were once employed in conquering rivals are now employed in subduing the soil. Science is diffusing its light and unfolding

the mysteries of vegetation. Elaborate treatises on agricultural chemistry, by distinguished authors, have applied the profound discoveries of philosophy to the homely toils of the field. President Hitchcock has described three hundred and fifty European agricultural schools. Even Ireland, with a territory not much larger than that of Maine, contains fifty in prosperous operation, to teach the art of cultivating the potato. Associations for exhibition and improvement, public journals devoted to agriculture for the purpose of diffusing light and awakening interest, are extensively prevalent, and bearing with united and mighty effect on the interests to which they are devoted, will almost spread a new soil over the face of the world.

It seems as if divine Providence, by directing so much talent and knowledge, and power and wealth, into the channels of agricultural improvement, is preparing the way for some new era in the history of the world. There is a career now opened to whose brilliant prospects no mind can set limits. The resources and capacities of the tilled ground will be multiplied beyond all the visions of the most lively imagination; the richest lands will add a thousand fold to their former exuberance; hard and penurious soils will teem with luxuriant products, and stones and sand will be transmuted by the magic of science into fertile fields, waving with golden harvests. Perhaps those immense wastes of the earth, where nothing has grown since creation, will be reclaimed to industry and cultivation. Perhaps that vast desert in northern Africa will be subdued to the use of man, and its three millions of square miles of burning sand be converted into tillage and verdure, resounding with the voices of a happy people instead of echoing the roar of the ferocious beasts, who roam over its trackless surface.

2. Some of the most potent obstructions to the culture of the soil are giving signs of removal. Tyrannical power is on the wane in every part of the globe. The bases of despotic thrones are tottering over the upheaving masses beneath them. Humanity is recovering its rights, and the soil its freedom, and those fertile regions so blessed by God, and blighted by man,

will pour out their riches into the lap of protected and well rewarded labor. Slavery and serfdom are contending with unequal hand against the progress of ideas, freedom and religion. The system of tenantry will be shaken down in these unquiet and revolutionary times, and free cultivation, independent ownership, labor urged by unconstrained and spontaneous impulse, and guided by the light of intelligence, will give agriculture its just rank among human employments, and infuse new vigor into its progress of renovating the earth.

We have reason to congratulate ourselves on the agricultural prospects of our country. The wide ocean which separates us from the old world disjoins us, in a great degree, from the defects and vices of its political and social systems. The vast waters roll their everlasting barrier between the freedom and enterprise of these new shores, and the mighty fabrics of selfishness and oppression, which have blasted the fairest portions of the earth, and crushed the arm of agricultural toil for two hundred generations. With no despotism to snatch the earnings from the hand of labor, with no system of tenantry and entail to enrich the lordly proprietor at the expense of the vassal ; with an unparalleled diffusion of popular intelligence, and moral influence, and the whole system of society moving forward under the high pressure of such mighty and healthful influences, as never stimulated the industry and enterprise of any people, in this opening era of invention and improvement, what wonders of agricultural achievement may not the course of time witness, and what a green robe of beauty will not the skillful hand of labor weave over the whole face of the union. One deplorable exception to encouraging indications stands out too prominent to be passed in silence. We must confess the presence of that bane of agricultural prosperity, that mildew upon the soil, *domestic slavery*. But its limits are ascertained, and its doom is sure. The whole spirit of republicanism, and the American notions of political right and equality are in direct antagonism with the institution. Every slaveholder sees in the bondmen before him so many living contradictions of his doctrine of inalienable rights, and his professions of democratic freedom. The human countenance

that meets the eye, and the articulate speech that salutes the ear, and the limbs that perform the toil of the planter, lift up three millions of voices, loud as the sound of many waters, to proclaim that the bill of sale and the deed of inheritance by which the bondmen are held, are against republican law, republican right, republican freedom, and republican religion, and ought to be null and void, and altogether held for nothing. This obstacle to agriculture in the states where it is situated, must fall. The same influences before which it fell in many parts of the old world are asaulting it with a more vigorous impulse here. The progress of the age is against it. The civilization of the nineteenth century is against it. The lights of science are against it. The improvements of the arts are against it. The increasing humanity of the times, the spirit of freedom, the brightening course of christianity, no where more conspicuous and effectual than in this new land, are hastening its downfall, and the arm of the Almighty is lifted up for its overthrow.

I proceed to notice some of those modes in which improvement of agriculture can be promoted.

1. The system of popular education should enlist our ardent sympathy and support. Three fourths of the people of the United States are said to be engaged in the labors of the field. These three fourths reside in the country, and are receiving their education principally from the common schools. A very small proportion extend it beyond the means which these seminaries afford for mental cultivation. So far as the influence of the school is concerned, they owe the direction and discipline of their minds and the information with which they are stored to these sources of instruction. They are three times of as much consequence to the farmer, as to all the other classes of community, so far as relates to the numbers connected with them, beside the importance which they derive from the fact, that such kind of education is for the most part acquired in them, without the additional aid of academic and other higher institutions. It is the concern then of every farmer, and of all others who feel interested in the improvement of this class of our citizens, as well as in the progress

of the noble art to which they are devoted, to render these instruments of popular education as efficient and useful as possible.

Aside from any considerations connected with the advance of agriculture itself, to which the present remarks are particularly directed, it cannot be denied that those institutions in which so large a portion of the youthful portion of the community are receiving almost all the training which is acquired from professional teachers, deserve the highest attention and support. The common school is eminently the farmer's school. It is not only the primary school, but the academical institution, and the college in which he takes his degrees, and whose influence contributes so much to form character, and fit well or imperfectly for exercising those rights of citizenship, which, always most important in any circumstances, assume a most transcendent and fearful consequence, when we consider the preponderating numbers of the class with which he is associated.

But I have particularly in view the influence of education in fitting him for a more successful prosecution of his employment. There are some persons, who think little of agricultural seminaries and scientific farming, but place great reliance on the observation and experience of practical men. From the value of the maxims of experience, I would not detract a particle. But all must allow, that the observations of some men are worth infinitely more than those of others; and that if the agricultural interest is to depend chiefly on observation for its progress, we need wise observers. If we must place principal reliance on the opinions of practical men, we should have intelligent practitioners.

Every agency which strengthens and expands the powers of the mind fits a person for a keener and wiser observation in any department of labor to which he has addicted himself; and other things being equal, the best reader, grammarian and arithmetician in the common school will be the most intelligent and successful cultivator of the ground. An inactive and torpid mind will make no observations, institute no comparisons, deduce no inferences. The mind of the farmer is as much bet-

ter fitted to gain useful practical knowledge by cultivation and discipline, as his arm is to labor by having a strong muscle and bone.

It is a matter of congratulation, that those who cultivate the soil in New England, enjoy such advantages for early education. It was once a common complaint in England, that the farmers were men of dull and sluggish minds. Wesley said that he could do nothing with farmers, an observation of course to be understood with reasonable limitations. While the colliers, and manufacturers, and the degraded populace of London could give a quick response to the tones of his stirring eloquence, the mind of the farmer was comparatively unsusceptible and impenetrable. Our free schools and other public institutions have made a difference in favor of this class of persons among us. And through the extension of the same influences, particularly those of school education, which have produced this diversity, every farmer can be made a wise observer, skillful to compare results, sagacious in deducing conclusions, and able to be a useful contributor to the common stock of information and improvement. But this is not all we need,

2. Agricultural schools on the plan of those in Europe, taught by men versed in all sciences connected with the cultivation of the soil, and to which lands are attached for the purpose of experimental and practical farming. The attention which this subject can receive in the common school must be of quite an elementary and general character. Whilst the knowledge gained in this way is useful as far as it goes, it does not meet the present demand. The common school is already so crowded with studies which are thought to be indispensably important branches of education, that there is a strong tendency to want of thoroughness to, and superficiality in the manner of teaching those which are of the first necessity and lie at the foundation of all knowledge and mental discipline. Besides, among the thousands of teachers who resort to school keeping, as a mere temporary employment in the younger period of life, with minds comparatively immature and unfurnished, and upon whom our common schools must depend for an indefinite period, how many are qualified to

teach any more than the mere rudimental and general parts of the science, from meagre text books, prepared for the purpose, without the aids of experiment and practice which will be furnished by the proposed schools, and are of such vast importance, to complete the preparation of those who are destined to the employment of husbandry. The system of common schools must undergo a complete revolution, and become very different from what it is now, or will probably become within any period of reasonable computation, before it will meet the exigency of the case and satisfy the demands of agricultural education. There can scarcely be conceived anything more impracticable and visionary than the projects of some who propose to employ our present system of free schools, as an instrument to diffuse the necessary degree of agricultural science among the people. They might as well be metamorphosed into colleges and universities, into schools of law, medicine or theology, to teach the whole circle of the sciences and prepare young men for the three professions, as to take the place of those agricultural seminaries, for which there is such an imperative call in the community.

The proposed schools offer the following advantages :

1. The teachers will be men exclusively devoted to investigations connected with an improved state of cultivation. We have few or none of this description among us. We have learned professors of chemistry, mineralogy, botany, whose profound researches into sciences which it is their business to illustrate, have been of inestimable advantage to the concerns of agriculture. But if we could have gentlemen of equal intellectual character and attainment, placed in situations whose duties require them to pursue the study of these sciences, with reference to the cultivation of the soil, they would contribute in a much greater degree to the improvement to which the present occasion is devoted.

There is, it is true, great complaint that the recommendations and theories of scientific men, are frequently of no value to the farmer, because they will not stand the test of experiment; and so practical agriculture, as it is called, is set infinitely above the speculations of learned theorists.

Now the proposition is to establish schools in which the theoretical and practical are combined. Every new deduction of scientific research will be subjected to actual experiment, and tested by successful results, before it is patented for the public use and benefit.

It is also fair to put the question whether the recommendations of learned men, any oftener fail in experiment, than the suggestions of merely practical men. A person has only to read an agricultural paper, containing the opinions of those who are fresh from the field, he has only to attend a meeting for discussion, in which he hears modes of tillage advocated by gentlemen who confidently lay claim to have put them to the proof of successive trial, and see how common it is for them to be in direct conflict with each other; and for one to overthrow what another asserts to have been established on the firmest foundations of experience, to be convinced that practice has its uncertainties as well as science. A hundred practical men will earnestly advocate a mode of agriculture which they have proved by the demonstration of experiment, to be the best mode in the world, which a hundred other men, as experienced and wise as they, will in the same manner make it clear, is of no value at all. If science and practice often disagree, neither does practice agree with practice. Practical men have no right to throw this imputation on science until they have wiped the reproach from themselves.

If all the theologians of the United States were convened in one place to debate their points of faith, and all the agriculturists to discuss their points of practice, I doubt whether it would not come out, that there was nearly as much disagreement in the one assembly as in the other. This I confess to be a strong assertion. How much do practical men differ about the disease of the potatoe? There have been as many theories about the source of that extensive malady as have been broached respecting original sin, and what one recommends as an infallible specific, another declares on the faith and knowledge of a practical man to be inert and powerless. One objection to agricultural schools, which some assert with much confidence, is, that they will afford their advantages to

but a portion of the people. They will not be democratic and diffusive enough in their influence, and while a few will be gathered within their walls, to reap their fruits, the great mass of the people will be left unprovided for, and unbenefited.

In reply to this it may be said that the number of schools of this description will be limited only by the patronage which the public are willing to afford them. They may be multiplied to as great a number as the demands of the people require, and if all the agricultural class choose to enjoy the advantages of such institutions, they can provide themselves accordingly. The additional profit which they would soon be the means of conferring on tillage, would afford the amplest means to erect and sustain them in sufficient numbers to meet all the wants of the community.

But it is not to be expected, for the present at least, that any more than a portion of the agriculturists will feel an inclination to participate in the superior benefits of such establishments. Nevertheless the whole mass of the people will be as really profited by comparatively few schools, as though they were multiplied to a sufficient number, to include every individual within their limits. Every part of the country will be represented by those who resort to them, and when they have completed their course of preparation, and retire to their respective homes to enter upon the pursuits which they have chosen, they will exhibit an example of correct and successful tillage which will excite curiosity, attract imitation, and raise the standard of agriculture in all their vicinities. Their new methods of cultivation, their communications with those around them, will stimulate inquiry, gradually diffuse correct and useful ideas, and extend the influence of the school in every part of the community.

It is probable, also, that a multitude of useful publications will issue from the pens of those who are devoted to teaching, agricultural science, which, popular in their form, will have extensive circulation; and thus, in one form or another, there will emanate from these institutions, an influence which shall penetrate among the masses, and beneficially reach thousands who have never placed themselves within the sphere of their

immediate operation. They will be so many lights which will shed their rays not only upon those who are brought into immediate contact, but diffuse their beams abroad, illuminating remote places, finding their way into obscure recesses, and in a thousand forms of direct emanation, and reflection and refraction, pouring out their splendor to the utmost limits of the horizon.

2. Another advantage is, that they will give new attraction to agriculture as an employment. I have alluded to a class of young men, who seek what they think to be a more elevated pursuit than the tillage of the field. They have an ambition of rising in life; and they very naturally conclude that the farther they get from the ground, the higher they fly. Those who unite a thirst for knowledge, with aspiring views, and some who do not, are inclined to betake themselves to the university; and the door which admits them within its walls shuts out the vulgar toils of the field forever. It is a common observation, that the dullest boy in the family is selected to follow the father's pursuits, on the ancestral grounds, while the one which appears most vivacious and active is singled out for the college, or some more tasteful and supposed dignified vocation.

Now let the road to the best conducted agriculture be through a scientific institution, let classes of youth go out annually from the tuition of learned instructors, versed in those sciences which are connected with the culture of the earth, let them enter upon the business of farming as young men enter the professions after graduation at the college, and it would contribute much to raise agriculture to that position which it ought to hold among the other vocations of life; and many who are now a burden to the professions, and are wrecked in the fluctuations of merchandise and commerce, would be found pursuing a safe, happy, and useful course of life. President Hitchcock saw in some of the agricultural schools which he visited in Europe, young men from families distinguished by their opulence and position in life, habited in frocks and performing cheerfully some of the most coarse and uncleanly labors connected with the establishments. Perhaps these indi-

viduals were drawn thither by the dignified associations which in their view, science and education had thrown around their employments, and in other circumstances would have disdained such menial offices, as they would deem them, and have crowded into more elevated and congenial pursuits.

Another desirable effect would follow. When commercial men in our large cities have acquired opulent fortunes, and are possessed of taste and fondness for display, they seek often to gratify their inclinations in costly equipages, works of art, and magnificent architecture. There is no objection to such expenditure, when properly directed and bounded by reasonable limits. When men of great means divert a portion of their resources to the patronage of the arts of statuary and painting, and other products of genius and taste, they are devoting wealth to some of its noblest uses. They are counteracting the tendency which a close application to commercial occupations, has to foster contracted and sordid propensities. They are imparting refinement and elevation to their own feelings, and contributing to diffuse through a community sufficiently devoted to the love of gain, a healthful and liberalizing influence. But the taste for fine arts and magnificent display may become excessive and misdirected.

If some men of wealth, who now expend a hundred thousand dollars on the erection and fitting up of a dwelling, would limit the outlay to fifty thousand, and reserve the remaining half to purchase some unproductive and waste land, whose tillage is too difficult and costly for persons of small means to undertake, on which to gratify their taste. and cover it with the beauty of a luxuriant and ornamental vegetation, they would contribute to the promotion of agricultural improvement, and at the same time indulge a taste as much nobler than that which they gratify now, as the beauties of nature transcend those of human device. Why is not a fine landscape as worthy an object of admiration as the painting which exhibits its imitation to the eye? And why has not the divine skill which exhibits its wonders in the exquisite structure of plants, and the ornaments with which it gilds the flowers of the field and the rich forms and foliage with which it invests the trees

as high claims to the homage of taste, and the expenditure of resources, as the art which hews the rock into the resemblance of the human form, but can confer no life to utter its expression through the rigid features. To a person whose susceptibilities of gratification, are directed by right principles, the process by which a sterile and uninviting surface is converted into a rich and waving field, which causes the wilderness to blossom, and turns the foul morass into a smooth and verdant lawn, conveys as much pleasure as that which causes palaces to spring out of the rough stones of the quarry. There are those whose well directed sentiments lead them in this direction; and the land which they have subdued to tillage, and adorned with loveliness, whilst it has been a noble monument to their taste and magnificence, has excited emulation, diffused more correct and useful ideas, and has been a subject of study and improvement to surrounding admirers. Some opulent men, of extensive information, and liberal views, have by their intelligent and advanced modes of cultivation conferred immense benefit on a large region. The spot which they have selected as the subject of their operations, and upon which they have bestowed their successful skill, has been a school of instruction to a whole community. In proportion as farming assumes a higher rank and becomes invested with new attractions, such instances will be multiplied; and we shall see those splendid monuments of wealth and intelligence adorning the surface of the country.

Mr. Webster might have expended the funds which he has devoted to his farm of fifteen hundred acres at Marshfield, to the erection of a splendid mansion in Boston. But the farm is a nobler monument to his republican, and old Roman taste, than would be a palace in the metropolis, whose architecture should surpass all Grecian fame.

Lastly. As a necessary consequence, farming would become more productive and profitable, particularly in the older parts of the country.

I have alluded to the influence of slavery in this country, in producing a constant deterioration of the soil. But the land has become much exhausted in the free states also. If, as it is

confidently asserted, a thousand million of dollars are required to repair the effect of injudicious and wasting culture, and to restore the lands to their original fertility, it is high time that an improved system should be introduced. Be it remembered that this deterioration has arrived at its present point under the labors of *practical* farmers, so called. Those men, of whom it has been said that they possess all the knowledge which is of any value to field culture. If the only valuable knowledge which we possess on this subject, produces no better effects than these, then may we expect that the older regions of the country will cease to remunerate the cultivators; the rural districts of New England will become a wilderness, and be abandoned to perpetual sterility, and the plodding labor which has drawn out the fine gold from her bald hills, will be exchanged for a search after the dross of the California mountains. But the evil admits of a remedy. The downward process can be arrested, and stopped at the point which it has reached. It is only for the community to awake to the nature and responsibilities of the crisis, and comprehend the right source of relief, it is only for the national and state governments to extend, in suitable ways, their fostering and efficient care to this great interest of the country, and aid in bringing the lights of profound research to the guidance of agricultural labor; and the same science which directs the track of the mariner in remote seas, and almost communicates the power of thought to the ponderous and ingenious machinery that executes the labors of millions of human hands, which has brought the poles of the earth together by rapidity of motion, and transmits ideas on the wires of lightning along nerves of steel, will cause vegetation to spring from arid sand, and convert the wilderness into a fruitful field, and that field into the garden of the Lord.

Massachusetts has always been distinguished for that wise and liberal care which she has taken to develope the internal resources of the state and promote her prosperity. It is most earnestly to be hoped that she will not overlook that interest which constitues the source and strength of all others that contribute to the support and comfort of her citizens; and that

the next legislature will give the crowning grace to all former splendid achievements, and respond to the loud voice which resounds from her remote borders, by lending its mighty aid to a system of agricultural education.

You are assembled, gentlemen, on another anniversary, with no signs of abatement in the interest which has attended former occasions. On this beautiful autumnal day, at the close of a favorable agricultural season, amidst the crowds which have come from all quarters of old Essex, to exhibit their interest in your objects and proceedings, surrounded with the noblest specimens of industry and skill, you are prepared to render thanks to Him who has given the earth its fertility, rewards the labor of the husbandmen, and has declared that seed time and harvest shall never fail. It is fit that amidst these scenes of interest and congratulation, we should remember the dead. You miss one* from your assembly and counsels, who has long been a zealous and able coadjutor in your worthy object, and has given his most earnest thoughts and devotion to secure its highest prosperity. His wise and useful labors have been withdrawn from the interest which he loved so well, and whose magnitude he appreciated in its just light. You can show no higher honor to the dead, than to promote with undiminished zeal that most noble enterprise to which he consecrated so much of his living energies. May all public and private duties be performed with such pure motives, and faithful assiduity, as to secure the gracious approbation of the Lord of the harvest and the Judge of the world.

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*Hon. Asa T. Newhall, of Lynnfield, late a Vice President of the Society.

# REPORTS, &c,

## INTRODUCTORY REMARKS.

Experience is the best guide. On a review of what has been done by this Society, there is much cause for congratulation. Nevertheless, when we look about and see what others are doing, it is impossible not to perceive that increased efforts are necessary to maintain that comparative reputation, we have so long enjoyed. On all sides, it is admitted, that the publications made, under the direction of this Society, have done much to awaken attention to the importance of improvements in agriculture. For these, there is due to PICKERING and COLMAN, a large debt of gratitude.

When we say that increased efforts are necessary, we refer particularly, to what is wanted on the day of our "Cattle Show." It is not sufficient to bring forward animals enough to absorb the premiums offered, and only enough for this purpose; but there should be a full and fair representation of the stock of the County; and more or less, from every town in the County. Every Trustee when he accepts the appointment should feel it to be a duty to see that his town or his neighborhood is fully and fairly represented at the Show. Not simply that they may enjoy their share of the bounty, but that they may do their part in diffusing instruction useful to the public.

Is there any town in the County, that could not with ease, bring forward twenty or more pairs of working oxen? Suppose this to be done by each town, and a brigade of 400 pair

of cattle to be paraded on the day of the Exhibition, each town having its own section, under its own guides, selected and arranged, under the impulse of that ambition, that would not fail to be excited! This would be a "Cattle Show" indeed. With the liberality extended by the Railroads, of passing free of expense, all animals intended for Exhibition; and the assurance that is given that they will be fed by the Society, such a Show might be easily brought about. Shows like this have been made in other Counties; why may they not be made in Essex? Our own eyes have witnessed the present year, a team of *one hundred yoke of cattle* from a single town on the banks of the Connecticut, accompanied by twice this number of the farmers of the town; and we do not remember to have seen, at any time, a more pleasing sight. Let a feeling of generous ambition be awakened in the several towns, to bring forward the best grown, best fed, and best disciplined of their cattle; and without question, they would find ample reward for their exertions, consequent upon the improved condition of their cattle, that would necessarily result from the competition.

We have spoken of the efforts proper to be made to increase the Show of Cattle: but we would not be understood, as limiting efforts to this branch alone. This is mentioned only as a sample of what may be done. In most, if not all the other branches of our Exhibition, there is equal room for improvement. Take for instance, the cultivation of vegetables, a pursuit that engrosses much attention in every town of the County; how little has been shown, in comparison with what has been done? How interesting would be the spectacle, of a table spread by each town, with the best specimens of the products of their soil? Let it be understood that such tables will be prepared, and let there be committees from each town to see that their own town is fairly represented, and our word for it, there would be such a display of products of the garden and the field, as the eye has not before seen. The rocks of Marblehead and the sands of Methuen, would nobly contend with each other in their exhibition of *squashes*: and the plains of Danvers would bring forth *onions* not a few, to savor the enter-

tainment. A spirit of emulation, of this kind, needs to be awakened, before we can fully appreciate what can be accomplished.

We forbear to speak in detail of the exhibitions of the present year; choosing to refer to the Reports of the Committees having these matters in charge. We have indicated some points, in which, we think, there is room for improvement; and we confidently hope that the yeomanry of Essex will continue to be so mindful of their well earned fame, that they will not suffer any reasonable effort to be omitted, necessary to maintain it.

There seems to be an almost imperative necessity of some modification of the arrangements on the day of Exhibition. Many are of the opinion that *two days* should be appropriated to the show. The chief objection to this, arises from the expense of persons and animals being away from home over night. If all entiries of stock and articles for exhibition, could be made and properly arranged by noon of the first day, so as to be examined by the several Committees on the afternoon of that day; this would give ample opportunity for the preparation of Reports, and for the public to view on the second day. It may, however be deemed expedient to appropriate two days for the show. Some modification seems to be indispensable to avoid the confusion incident to the examination of the multitude of objects demanding attention.

It was particularly gratifying to the farmers of Essex, on the day of their Exhibition, to be favored with the presence of the Governor of the Commonwealth, and to hear from him the words of instruction and encouragement. This was as it should be. The farmer merits and needs this encouragement. Content to labor as he does from "early morn to latest eve," and "by the sweat of his brow to eat the bread of carefulness," it is meet that he should be encouraged: and what better encouragement can he have, than the approbation and sympathy of those in authority.

The address before the Society was delivered by the Rev. Milton P. Braman, of Danvers. It will be found replete with sound instruction. JOHN W. PROCTOR, PRESIDENT.

A. W. DODGE, SECRETARY.

## ON POULTRY.

The Committee on Poultry, Report :

They congratulate the Society on the fine show of Poultry, presenting a greater variety, if not greater numbers, than at any previous exhibition.

The whole number of fowls presented, including about sixty water fowls and a large lot of beautiful fancy pigeons, was about five hundred. There was also a fine specimen of the Grey Eagle; but as he does not fairly belong to the race of Domestic Fowls, the committee considered him a distinguished delegate to our exhibition from the fowls of the air.

The Committee recommend the award of the following gratuities :

To S. & O. Southwick, of Danvers, for the best collection, consisting of twenty-five coops of fowls and an equal number of varieties—among which may be named, as very beautiful and pure stock, White Shanghae, Black Spanish, Sumatra, Game and Irish Game ; also, one pair of imported India Game, the only specimen on the ground—the whole showing great care and skill in selection and rearing. $6 00

To Daniel Putnam, of North Danvers, for a lot of cross breed fowls, very fine. They were accompanied by a statement showing them possessed of great laying qualities, 4 00

To J. H. Putnam, for the best lot of India fowls—well marked, 3 00

To A. L. Peirson, jr., of Salem, for the best lot of Dorking chickens, very distinctly marked, 1 00

To D. B. Baker, of Danvers, for a fine lot of Black Spanish, 1 00

To A. P. Bateman, of Georgetown, ten varieties of fancy pigeons, very beautiful, 3 00

To Samuel Twisden, of Lynn, for a large and splendid lot of Muscovy Ducks, 2 00

The Committee would gladly have recommended gratuities to a much greater extent, if they were not restricted by the rules of the Society. They cannot forbear mentioning,

among others, the following, as being well worthy of the attention of poulterers, and others interested in fowls:

Fine specimens of well bred fowls, by William Clark, of Lynn, one being a Bantum Pullet, six months old, with chickens.

Thomas S. Osborne, of Danvers, Black Spanish, and several varieties of Game.

Daniel Buxton, jr., of Danvers, splendid pair of Java Game.

George C. Johnson, of Salem, fine lot of imported Shanghaes.

Charles A. Beckford, one pair of beautiful fowls, of fine, silky plumage, imported from Angier.

J. L. Porter, of Beverly, one pair of Guinea fowls.

E. P. Ketelle, beautiful Bantams in a fine cage. We may here remark that we witness great improvement, since last year, in what we may call Poultry Architecture—some of the cages exhibiting great beauty, as well as ingenuity and skill in their construction.

C. S. Whitmore, of Salem, presented a splendid cross breed between Dorking and Black Spanish, well worthy of the attention of fowl breeders, and which the Committee would recommend for their beautiful appearance, as well as more solid qualities.

A. D. Rogers, of Salem, presented a cage of about twenty specimens of the Perley stock of Shanghaes, very fine. One of the Pullets, who was in the egg in the spring, began to lay in July.

There were also many other cages of common and cross breeds, deserving of mention, which attracted a large share of attention on the field.

The rearing of Poultry is now understood to be a very important branch of rural economy, and to a limited extent a source of sure and ample profit to the farmer. When viewed in the light of a luxury merely, in the pleasure afforded to the proprietor by exercising his taste and judgment in producing fine forms and varied and splendid plumage, and in watching the developments of the young broods in their different crossings, it almost rises to the dignity of one of the fine arts.

If the object is mainly one of pecuniary profit, it becomes an important inquiry to ascertain which of the different varieties it is most profitable to rear, some being most valued for the table, and others for being the best layers. It is known that the flesh of the male fowl in all the varieties may be much improved by caponizing, and the committee regret that no specimens have been exhibited to day. The skill and trouble requisite for this change would be amply repaid by the greatly improved value of the fowl. We all instinctively eschew bull beef and prefer that of the ox. Why then should we not by the same means seek to provide ourselves with that delicate and nutritive meat which has rendered Shakspeare's Country Justice—

"In fair round belly with good *Capon* lined,"

the very epitome of good living. There is still much difference of opinion existing among breeders as to the relative value of the European and Asiatic varieties in their qualities as layers and for good flesh. The Committee do not propose to enter into the controversy on the origin of the different varieties, some poulterers contending that only one pair of gallinaceous fowls entered the Ark, and that climate and location have caused the variety, while others insist that Mrs. Noah had the care of Malays, Shakebags and Bantams, as well as Dunghills. It is sufficient to know that there are now many kinds marked by distinct peculiarities, and that they have various good qualities differing each from the other. It is the province of the fowl breeder to combine these excellencies by the judicious crossing of the breeds, carefully marking the result in each case. Here is a fine field for competition, and it might be well for the Society to require exhibitors to present statements of their manner of keeping their fowls, such as that offered today by Mr. Daniel Putnam, and which we append to this Report. It would also be well to require the number, or what would be better, the weight of the eggs produced in a given time, as a foundation for the awards.

It is a source of much gratification to witness the high and increasing consideration with which the denizens of the Poultry yard are now held. The great interest in these feathered

tribes, which has sprung up of late years, promises the most satisfactory results. This interest is most strongly manifested when men are so far carried away by their enthusiasm as not only to cackle and crow with delight over their choice young broods, but so far identify themselves with the feathered race as actually to lay eggs—on Editors' tables; and when even our grave Legislators are contented to SIT so much longer than the most patient of the poultry tribes. People are beginning to appreciate the value of these once neglected races. They see that they not only yield good pecuniary returns, but that in other respects they are the friends and benefactors of our race. Without their aid what a gloom would be cast over our Thanksgiving festival, and what an absurd mockery would it be to congratulate each other on a MERRY Christmas. Suppose the female fowls to be animated by some patriotic impulse, such for instance as was once felt by our Revolutionary mothers in their refusal of tea,—and that they should unanimously refuse to lay eggs. What a revolution would take place in our kitchens and larders, and of what possible use would be books of cookery and housewifery. Sensibility shudders at the solidity of fruit cakes, and humanity mourns over the specific gravity of batter puddings!

We gladly turn from this sad picture to witness the quiet enjoyment of the feathered families as they range their little domain. With what joyful exultation is the advent of each new laid egg announced by the merry cackling of the whole domestic assemblage. How carefully and tenderly the matronly hen attends her young chicks until their arrival to the full maturity of pullethood. How proudly and with what majestic mien and dainty step does Chanticleer walk the barn yard, and with what courteous dignity and chivalrous courage does he watch over his feathered realm. No wonder that Socrates, the wisest of ancient philosophers, thought this noble bird the most acceptable sacrifice to the immortal gods, and that our Puritan sires placed his effigy on the spires of their houses of worship. He is the herald of the morning and the clear and ringing tones of his warning voice are first heard to

awaken slothful man to the duties of the day.—As saith the quaint old legend—

> The Cock does crow, to let you know,
> If you be wise what time to rise.

The Committee are aware that there are some persons in this community who say they can see no good likely to result from what they sarcastically term this "hen fever." These are the conservative class, those worthippers of the past who oppose all innovations. They are so intensely Native American in their feelings that all their affections centre in their dearly loved Dunghill. They are jealous of the influence of foreign emigration and cannot endure such outlandish names as Shanghae, Hong Kong and Chittagong. Their patriotism is alarmed lest the Gallic Cock of France shall take the place of the American Eagle as our national emblem, and our old patriotic anthem of "Yankee Doodle" be supplanted by the new one of "Cock-a-Doodle-do." Their absurd fears make them turn pale at the sight of a White Dorking, and chicken hearted in presence of a Spanish Game. They shudder at the hissing of a Bremen Goose, stop their ears at the cackling of a Guinea hen, and whenever they hear a Cock crow, they go out and weep bitterly.

It is hardly necessary to say that your Committee have no sympathy with such fears. They have the most sanguine belief that this dreaded "hen fever" is producing the best results. They may be seen in the exhibition this day of improved races of fowls, and if it did not savor too much of "counting chickens before they are hatched," we would confidently predict a still better show another year. We would even indulge the hope that the march of improvemement will go on until it reaches the performance of that famous fowl we read about, of whom it was said that—

> Every day she laid *two* eggs
> And Sundays she laid THREE.

F. POOLE,
CHOATE BURNHAM,
A. D. WAIT,
G. C. PEARCE,
} Committee.

## DANIEL PUTNAM'S STATEMENT.

Gentlemen,—The lot of fowls presented for your notice to-day, are a sample of my small stock. They have been kept entirely confined to the henery,—a minute description of which I gave your Society, two years since, and may be found on your records. Of their variety, they are the common "Dunghill," crossed with the Black Spanish. The following statement of my hens, would have been more creditable, had not some one, on the night of the 10th of February, entered their premises, and selected from their roost, five of my very best pullets. I regret, that I cannot give you the name of the person who took them—as a good judge of hens—whose knowledge if HONESTLY used, might be of service to your Society, and the community.

In addition to the food estimated in my statement, I would say that, during the warm season, they are supplied with grass, sorrel, chickweed, and tops of vegetables, as freely as they will eat. Also the meat of several calves, killed when a few days old, have been given them. They are daily supplied with fresh water.

It may be stated that three pullets, hatched the 12th of March last, commenced laying, at the average age of four months, and five and one-third days, and have laid 72 eggs.

September 1st, 1850, my stock consisted of one crower, seven hens, and thirty-one chickens, from three to five months old. September 1st, 1851, of one crower, ten hens, and twenty-nine chickens, from two and a half to five and a half months old.

| Number of eggs laid in each month. | | Number and price of eggs sold. | | | | |
|---|---|---|---|---|---|---|
| Sept. | 94 eggs. | 2½ dozen at | 33 | cents per dozen | | .83 |
| Oct. | 70 do | 20 do | 25 | do | do | $5.00 |
| Nov. | 33 do | 18 do | 20 | do | do | 3.60 |
| Dec. | 60 do | 14 do | 18 | do | do | 2.52 |
| Jan. | 126 do | 12 do | 16⅔ | do | do | 2.00 |
| Feb. | 168 do | 3½ do | 16 | do | do | .56 |
| March | 173 do | 6 do | 14 | do | do | .84 |
| April | 223 do | 2 do | 12½ | do | do | .25 |
| May | 198 do | | | | | |
| June | 161 do | 78 doz. | | | | $15,60. |
| July | 180 do | 3 hens and 19 chickens sold for $8.02. | | | | |
| Aug. | 175 do | | | | | |

1661 eggs—or, 138½ doz.

| | |
|---|---|
| Number of chickens raised - - | 38 |
| Average number of hens - - - | 9 |
| Average number of eggs laid by each hen | 184 |
| Average price of eggs per doz. sold - | 20 cents. |
| Those not sold are valued at - - | 16 cents per doz. |

Expense of keeping one year, from Sept. 1st, 1850, to Sept. 1st, 1851 :

| | | |
|---|---|---|
| To 13 bushels of corn - - - - - | | $9 50 |
| " 7 " " shorts - - - - - | | 1 70 |
| " millet - - - - - | | 50 |
| " sunflower seeds - - - | | 1 50 |
| " beets and turnips - - | | 70 |
| " 75 pounds of soap grease - | | 3 00 |
| | | $16 00 |
| Eggs sold - - - - - - - | | $15 60 |
| Hens and chickens sold - - - - | | 8 02 |
| Value of chickens used - - - - - | | 3 77 |
| Value of eggs used - - - - - | | 9 60 |
| Value of manure - - - - - - | | 5 00 |
| | | $41 99 |
| Expense of keeping - - - - | | 16 90 |
| Profit - - - - - - - - | | $25 09 |

North Danvers, Sept. 25th, 1851. DANIEL PUTNAM.

## ON DOMESTIC MANUFACTURES.

The Committee on Counterpanes, Carpetings, and Rugs, Report :

That, from the limited time allotted them for the examination of the several articles in this department, and the necessity which compels them to make an immediate Report, together with the fact of a discrepancy in some of the marks and numbers, they cannot hope to give entire satisfaction in their decisions. Justice to themselves, as well as to those who

may feel themselves aggrieved, requires that these facts should be stated, because the Committee fear that real merit may not in some instances, have received its due notice or reward.

They recommend that gratuities be awarded as follows, viz:

QUILTS.

| | |
|---|---|
| Lucy E. Burnham, Essex | 50 |
| Mrs. Charlotte Weed, Middleton | 25 |
| P. S. Cary, Newburyport | 75 |
| Mary Flanders, " | 25 |

COUNTERPANES.

| | |
|---|---|
| Mrs. Mary A. Stevens, Ipswich | 1 00 |
| Sarah Clark, Beverly | 25 |
| Ann M. Bailey, Salisbury | 50 |
| Mrs. A. L. Vincent, Salem | 50 |
| Mrs. P. Merrill, Salem | 50 |
| Mrs. W. M. H. Copeland, Salem | 25 |
| Elizabeth B. Hyde, Danvers | 55 |
| Sarah A. Stevens, " | 1 00 |
| Mrs. T. W. Gwinn, Salem | 50 |
| Lucy A. Prescott, " | 25 |
| Mrs. R. Mugford, " | 50 |
| Mr. Stephen R. Fox, Newburyport | 50 |
| Mrs. Jesse Kimball, Andover | 75 |

RUGS.

| | |
|---|---|
| Abigail R. Edwards, Wenham | 75 |
| Elizabeth E. Cogswell, Essex | 75 |
| Mrs. Metcalf, Salem | 25 |
| Lorenza G. Rowe, Rockport | 1 00 |
| Caroline Peirce, Beverly | 75 |
| Sophia C. Storey, Hamilton | 50 |
| Mary A. Stickney, Gloucester | 50 |
| Mary A. Dodge, Wenham | 50 |
| Julia A. Smith, Beverly | 50 |
| Miss Charlotte Woodbury, Beverly | 1 00 |
| Esther H. Annable, Hamilton | 75 |
| Mrs. Susan Brown, Salem | 50 |

| | |
|---|---|
| Mrs. E. Cleaves, Beverly | 50 |
| O. M. March, Methuen | 1 25 |
| Mrs. C. Larrabee, Salem | 1 00 |
| Isabella Gilford, Ipswich | 1 00 |

MATS.

| | |
|---|---|
| Mrs. David Saunders, Salem | 50 |
| Mrs. E. S. Osborne, " | 50 |
| Henrietta Clark, Danvers | 50 |
| Mrs. E. Perry, Lynn | 50 |

In behalf of the Committee,
ALBERT G. BROWNE, CHAIRMAN.

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The Committee on Cloth and Hosiery Report, that no Cloths were exhibited, and beg leave to recommend the following gratuities on Hosiery:

| | |
|---|---|
| 10 pair Hose knit by Sarah S. Jewett, Danvers | $1 00 |
| 2 " " " " Mary L. Buxton, " | 50 |
| 2 " " " " Mary P. Buxton, " | 75 |
| 5 " " " " Hannah Goodhue, Salem | 50 |
| 3 " " " " Elizabeth Hanuel, " | 50 |
| 2 carded, spun and knit by Mrs P. Pillsbury, Georgetown | 1 00 |
| 3 pair and a half hose, knit by Mrs. I. Batchelder, Lynn | 1 00 |
| 2 pair mittens, knit by Mrs. Phebe Cross, Danvers | 50 |

For the Committee, FRANCIS SCOTT.

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The Committee on Leather, and Articles manufactured therefrom, having attended to the duty assigned them, submit their Report, as follows: They award to

| | |
|---|---|
| Twisden Brown, Georgetown, best thick boots, prem. | $3 00 |
| John McCombe, Georgetown, best calf boots prem. | 4 00 |

| | |
|---|---|
| James W. Griffith, Groveland, 2nd best calf boots, prem. | 2 00 |
| N. S. Vauce, Georgetown, calf boots, gratuity | 1 00 |
| F. Dane, Danvers, best brogans, premium | 2 00 |
| E. P. Thompson, Georgetown, 6 pair of brogans, gratu. | 50 |
| S. Driver, Salem, ladies' walking shoes, premium | 2 00 |
| " " " " kid slippers, " | 1 00 |
| Eliza N. Small, Danvers, pair gaiters, gratuity | 25 |
| R. Tenny, Georgetown, boot lacing and strings, gratu. | 1 00 |
| Emeline Tufts, Middleton, boot uppers, gratuity | 50 |
| Elizabeth Knowlton, Beverly, kid bound uppers, gratu. | 1 00 |
| E. N. Price, Salem, harness, gratuity | 2 00 |
| Geo. French, Andover, " " | 1 00 |

WARREN M. JACOBS,
PAUL TITCOMB. } Committee.

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The Committee on Fancy articles, and "articles not included in the duties of other Committees," as they were appropriately and expressively styled in a recent Report, have a very strong feeling of the difficulties in the way of making an accurate and perfectly just determination in the distribution of the gratuities placed at their disposal. While they believe that the beauty and elegance of the various articles exhibited in this department, were fully equal to the display of any previous year, the somewhat increased number of the contributions rendered the task of discrimination more than usually difficult, and the short time afforded for examination was found to be painfully insufficient.

Among the brilliant display of beautiful articles, which were brought forward from all parts of the County, the Committees have endeavored to make as fair a selection as possible in awarding the gratuities. In the matter of CREWEL WORK, it is believed this exhibition surpassed any which the society have ever had.

Some of the most noticeable articles exhibited were in this style, and attracted the attention and admiration of all specta-

tors, as well as of the Committee. Among these, the Committee desire to make honorable mention of two pieces by Miss Sarah S. Mugford of Salem, a lady who has been confined to her bed for a long series of years, by a disease which is very painful and probably incurable. Her work was very beautiful; the pictures and scenes represented seemed to stand out from the canvass, with life-like prominence, devoid of that angular expression usual to such work. A set of wrought chairs by Miss S. M. Skerry of Salem, also deserve special notice. The style and execution of the work was inimitable, and the chairs themselves were splendid enough for the parlor of a NABOB. Other specimens of this kind of work might be specially noticed, but the Committee content themselves with referring to the list of gratuities for further particulars.

Six boxes of Sea mosses, arranged and contributed by Miss Watson, were, in the opinion of the Committee, deserving of as much attention and praise as any articles in the exhibition. Both as regards the beauty of the specimens, and the taste displayed in their arrangement, they were fully equal to anything of the kind ever seen by the Committee, whether imported or not. Nothing could be more exquisitely beautiful, than the delicate tracing of some of the finer specimens of plants, and nothing more elegant than the whole effect produced by their arrangement. Two oil paintings, by Miss Very, were noticed by the Committee as displaying much skill and taste for art. It was understood that they were executed by ladies who have received very slight instruction in oil painting, and whose proficiency is very decidedly marked.

The Committee were somewhat at a loss to understand how they could be expected to pass judgement on such articles as water pails, bed cords, and gun stocks, inasmuch as their own opinion would be against styling such things as fancy articles. They were relieved from their doubts upon seeing, in a former Report, that they were considered a Committee "on articles not included in the duties of other Committees," and in the latter capacity they have awarded some of their gratuities.

One suggestion the Committee would like to make for the

consideration of the Trustees. It refers to the great number of articles contributed to this portion of the annual exhibition, evidently for the sole purpose of obtaining a free admission to the Hall. A very slight look at the list of articles contributed, or at least, at the articles themselves, would seem to show this very conclusively. It seems probable that it has got to be a very general practice, to hunt the house, during the week before the exhibition, to find something to contribute, for the sake of a free ticket. Anything is supposed to be sufficient, and the consequence is the crowding the exhibition tables with a multitude of trifles and little things, of no value and very slight beauty, and also crowding the Hall with a host of spectators who add nothing to the receipts of the Society.

Whether this is an evil which needs to be remedied, or which is capable of remedy, is not a matter for the decision of the Committee. The Committee recommend the following gratuities to be awarded as follows :

| | | |
|---|---|---|
| Adaline A. Putnam, Beverly, bead bag | | 25 |
| Abby Nichols, Salem, crewel work picture | | 50 |
| Miss S. M. Skerry, Salem, 4 wrought chairs | | 1 50 |
| Sarah A. Skerry, | " 1 wrought chair | 50 |
| M. C. Oby, | " leaf impressions | 25 |
| Mrs. J. L. Kimball, | " wrought chair | 25 |
| Miss Sarah E. Kimball, Salem, piano stool | | 25 |
| Margaret A. Dunn, Salem, crewel work | | 25 |
| Miss F. C. Smith, | " " " | 25 |
| Caroline A. Wallis, Beverly, knit tidy | | 25 |
| Miss A. A. Ober, | " " " | 25 |
| Mrs. A. Larcom, | " Racoon fur mittens | 25 |
| Miss Mary H. Dennis, | " knit shoes | 25 |
| Miss M. W. Kimball, Salem, lamp mat and tidy | | 25 |
| Miss M. A. Carlton, | " lamp mats | 25 |
| Maria I. Towne, | " crewel work | 25 |
| John S. Sibley, | " water pails | 25 |
| Sarah Christy, | " tidy | 25 |
| Mrs. S. A. Masury, Beverly, crewel work in frame | | 50 |
| Edward F. Harrington, Beverly, music box | | 25 |
| " " " " | ottoman top | 25 |

Henry Chipman, Salem, fire screen and lamp mat 50
Jerusha Rhodes, Lynn, (94 years old) stockings 25
Miss S. A. Felton, Salem, bead bags, table cloth and chair 50
Miss L. L. A. Very, " two oil paintings 50
Rebecca F. Patterson, Beverly, children's hose 25
S. M. Cutter, Danvers, children's, handkerchief 25
J. M. Stimpson, Salem, card basket 25
Henry B. Phipps, " map drawing 25
Caroline Buffum, " lamp mat 25
C. H. Henderson, " sampler 25
M. P. Ives, " lamp mat 25
Josiah Bailey, " bed cords 50
Mrs. Ropes, " christening scene 25
Mrs. M. Wardwell, Methuen, shell picture frame 25
Geo. H. S. Driver, Salem, picture frame 25
S. H. Tibbets, " pencil drawings 25
L. A. Lakeman, " worked cushion 25
Susan A. Allen, " watch case 25
Emily C. Pond. " lamp mat 25
Harriet M. Upton, " " " 25
Geo. W. Estes, " bureau and table 25
Abby E. Edwards, " lamp mat 25
Augustus H. Perry, " gun stock 50
Ellen A. Blaney, " tabouret 25
Mary Blaney, Salem, crickets, cricket top and lamp mat 25
M. S. Preston, " chair and lamp mat 25
Miss L. P. Cutts " 3 crayon drawings 75
Anstiss P. Cutts " Salem 25
Mrs. W. D. Wheeler, Danvers, table 25
Mrs. M. G. Farmer, Salem, lamp mat and table covers 25
Mrs. Wm. Knight, Salem, lamp mat, tidy 25
Mary E. Cutts, " wrought chair 25
Sarah F. Cutts, " " " 25
Mrs. Conner, " shell pyramids 50
Hannah E. Burke, Beverly, bead purse 25
Mary G. Carlton, Andover, lamp mat and cricket covers 25
Anna E. Conant, Beverly, 2 baskets 25
Mrs. E. L. Burr, Salem, lamp shade and lamp mat 50

M. White, Salem, 3 lamp mats 25
S. B. Mason, " pine cone vases 25
J. F. Clark, " 3 tidys 25
Simon O. Keith, Salem, lamp stands with lamps 50
Miss Watson, " 6 boxes sea mosses 1 00
H. A. Saunders, " cricket 25
Mrs. E. Trask, Beverly, cloth and tidy 25
H. A. Johnson, Salem, family record in frame 25
Miss Sarah S. Mugford, Salem, Washington in crewel work 25
" " " " " picture of a dog in " " 50
Miss E. A. Downie, Salem, shell picture frame 25
Mary Russell, " tabouret 25
Eliza B. Alley, " picture and frame crewel work 50
Mary R. Kimball, " carpet bag 25
Priscilla M. Potter, " lamp mat 25
Mrs. J. Masury, " worked bag 25
Elmira K. Roberts, Salem, pencil sketch of California gold digging 50
S. E. Symonds, Salem, sofa cushion 25
Mr. J. Randall, " ottoman top 50
Laura B. Root, Byfield, lamp mat 25
Sarah E. Hodgdon, Salem, ottoman 50
Lucy D. Symonds, " sofa cushions and lamp mats 50
Lydia F. Nichols, " picture in crewel work 50
Sarah E. Dalton, " 3 tidys 25
Abigail Lefavour, Beverly, tidy 25
S. E. Bates, Salem, crewel work 25
Ann E. Ladd, Lynn, 2 pine cone baskets 25
A. M. Bates, Salem, cushion 25
Mrs. W. M. Ladd, Lynn, pine cone boquet and basket 25
Mrs. A. D. Allen, Beverly, ottoman 50
J. P. Webber, do chair 25
Hale & Conley, Georgetown, 2 boxes soap 50
Helen M. Snell, Beverly, glass lamp shade 25
Martha C. Knight, Methuen, crewel work 25
H. N. Lord, Salem, screen in crewel work 25
Mrs. E. F. Woodbury, Beverly, ottoman 25
Mrs. M. A. Spofford, Groveland, bed curtains 25

| | |
|---|---|
| Anna Dodge, Salem, bag from melon seeds | 25 |
| Mrs. Stearns, Salem, 83 years old, 2 holders | 25 |
| Ann Lynch, Lynn, lace collar. | 25 |
| Ruth A. Felton, Salem, toilet cushion | 25 |
| E. R. Kimball, Salem, sofa pillow | 25 |
| M, M. Nichols, Salem, sofa pllow, | 25 |

For the Committee,

STEPHEN B. IVES, Chairman.

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## ON PLOUGHING WITH SINGLE TEAMS.

The Committee on Ploughing with Single Teams respectfully Report :—There were six Teams entered for premium :

Jedediah H. Barker, of Andover. Nathan Tapley, of Danvers, Franklin Alley, of Marblehead, Elijah Pope, of Danvers, Moses Pettingill, of Topsfield, Mary Putnam, of Danvers. And they ploughed as follows :

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| J. H. Barker, | 19 | furrows | in | 42 | min. | Plough—Martin, | | No. | 5. |
| N. Tapley, | " | " | " | 33 | " | " Ruggles & Co. | | No. | 71. |
| F. Alley, | 20 | " | " | 38 | " | " | " | " | 73. |
| E. Pope, | 19 | " | " | 34 | " | " | " | " | " |
| M. Pettingill, | 20 | " | " | 47 | " | " | " | " | 71. |
| M. Putnam, | 19 | " | " | 38 | " | " | " | " | 73. |

The land ploughed had not a tough sward, and was entirely free from small stones. It was ploughed six inches deep, and the furrow slice cut by each plough was two feet in width. The ploughing was all done remarkably well, and the Committee were at a loss which of two competitors was entitled to the first premium. Their GALLANTRY however decided in favor of Miss Putnam, and they awarded the premiums as follows :

| | |
|---|---|
| To Mary Putnam, of Danvers, 1st premium | $8 00 |
| " Franklin Alley, of Marblehead, 2d premium | 6 00 |
| " Nathan Tapley, of Danvers, 3d premium | 4 00 |
| " Moses Pettingill, of Topsfield, 4th premium | 2 00 |

It will be observed that the premiums were all awarded to Ruggles, Nourse & Mason's improved ploughs, Eagle No.

71 and 73. The plough manufactured by Martin was particularly noticed by the Committee, and they were much pleased with its operation; it was apparently of easy draught, easily guided and some part of the work done by it would compare favorably with that done by any other.

For the Committee, J. KITTREDGE.

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## ON PLOUGHING WITH DOUBLE TEAMS.

The Committee on Ploughing with Double Teams, have attended to the duty assigned them, and Report as follows.

There were seven Teams entered, six only appeared on the ground. The work was done remarkably well, and the Committee found it difficult to award the premiums, but after due deliberation they award them as follows:

To David S. Caldwell, of Byfield, 1st premium $10 00. Plough Eagle 20, Ruggles & Co.

To Nathan Tapley, of Danvers, 2d premium 8 00. Plough Eagle 72, Ruggles & Co.

To John L. Hubbard, of Byfield, 3d premium 6 00. Plough No. 72, centre draught, Prouty & Co.

To John Washburn, of Lynn, 4th premium 5 00. Plough Eagle 73, Ruggles & Co.

To Jacob Farnham, of Andover, 5th premium 4 00. No. 72 Centre draught, Prouty & Co. For the Committee.

HORACE WARE, 2d., CHAIRMAN.

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Nov. 1851.

To A. W. DODGE, SEC'Y.

Dear Sir,—On the day of our ploughing match, (Sept. 25th,) A MICHIGAN SUB SOIL PLOUGH was operated on the field and attracted much attention. It turns two furrow slices at the same time, laying one upon the other. Many farmers, who

were present, expressed a desire to know more of this plough. The attention of the committee was so taken up with their other duties, that they had not full opportunity to test its operation;—especially as it was not entered in the competition for the premiums. Having seen similar ploughs operated at Dedham, at Taunton, at Amherst, and at other places, uniformly with approbation;—and having heard some quere expressed, as to the power of team necessary for their movement, I determined to give them such a trial as to satisfy myself, at least, of their value. Accordingly, I wrote to Mr. Prouty, the pioprietor of this plough in Massachusetts, to send me TWO OF BEST STRUCTURE, so gauged as to turn a furrow slice ten inches wide, and eight inches deep—the sod part three inches, and the under soil five inches. This was done;—and on Tuesday last, they were put in operation, by my brother, Aaron C. Proctor, with a team of two pair of cattle, in presence of Dr. A. Nichols, E. King, J. P. King, F. Phelps, and others. Several of the gentlemen commenced the operation, with strong impressions against the utility of the plough. It was tried in every form, thought desirable to test its merits. It was compared with one of the best EAGLE PLOUGHS, Ruggles & Co. The work was continued, until each gentleman present had an opportunity to hold, until he was satisfied. The result was, that each and all, expressed their opinion, that the plough was a decided improvement on any ploughs they had ever seen;—and that it would be found of great value, for many uses on the farm. Having this morning received a note from Mr. Wm. R. Putnam, one of the gentlemen, who assisted in operating the ploughs, I thought I could not do a better service for our farmers, than to give you an extract from this note, (to be appended to the Report of the Committee on ploughing.) Mr. Putnam says, "my impression when I first saw the plough was, that it might pulverize the soil well, but that it would require more power to operate it than a common plough. But in the practical operation of it, I was disappointed. It appeared to work as easy for the team, as the common plough; and easier for the holder, in fact, it almost held itself, one part balancing the other. I saw it move many rods ac-

curalely without any guidance. I could not at first see how it was possible for it to move so easily as the common plough. But I think I now understand how the extra power required to draw the small plough, is counterbalanced, by the ease with which the furrow slice is inverted, after it is split in two parts. We know that two boards will bend much easier, and support less weight, than a plank of the same thickness from the same log. May not the same principle be applied to turning the furrow slice? I think that any one who witnesses the operation of this plough, will notice that it rolls the furrow slice over much easier, than does the common plough. If upon trial, it shall be found to work as well, as when I saw it upon your brother's field, I think it will prove a useful invention."

I have ventured to give the opinion of Mr. Putnam, rather than my own, because where he is known, his judgment will be valued as high as that of any other practical man in this vicinity. My brother assures me that he fully concurs in this opinion—although at first, his impressions were not favorable to the plough.

I am well aware, that we are in danger of being captivated by NEW THINGS. Such was the case, to some extent, with "BARTLETT'S DOUBLE PLOUGH," which METEOR LIKE flashed upon us, and vanished away. Nevertheless, great improvements have been made, within the last THIRTY YEARS, in the structure of the plough; and if I do not mistake entirely, this will be found among the most valuable of the improvements that have been made. I do not suppose this plough will be adapted to every kind of work. Its peculiar use, is for the breaking up of cultivated grass land;—land from which the fast rocks have been removed, as they should be from all cultivated fields. The farmer, who, year after year, worries himself and his team, by ploughing over fast rocks in his field, thereby makes a mistake. It would be much better to remove them at first, whatever may be the labor required, than to continue to plough about them or over them. A field that is worth cultivating at all, is best done in the best manner. How this plough will operate in old ground, I have not witnessed; but my belief is, it will do well, and greatly facilitate the minute

pulverization of the soil, which is the grand purpose of ploughing. Truly yours, J. W. PROCTOR.

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## ON WORKING OXEN.

The Committee on Working Oxen Report, that twelve pairs of oxen were entered for trial. Only ten pairs appeared upon the ground, and those were well trained, and such as would do credit to old Essex County, or any other County in the State. Each pair were tried with a load weighing more than two tons, and the weight of the wagon another ton. The manner in which each pair exercised the load, gave satisfaction to the Committee. It was found to be no easy matter to determine how the premiums should be awarded. There was some difference of opinion amongst the Committee, as to which should take the first premium, but after due deliberation it was concluded to make the following awards:

To Jonathan Berry, of Middleton, for his 5 years old oxen, 1st premium - - - $10 00

To Elijah Pope, of Danvers, for his 6 years old oxen, 2d premium - - - - 8 00

To John L. Hubbard, of Byfield, for his 7 years old oxen, 3d premium - - - - 6 00

To Jedediah H. Barker, of Andover, for his 7 years old oxen, 4th premium - - - 4 00

The Committee regret that it was not in their power (for it did not come within the rules of Society) to give Henry Poor, of Andover, a premium for his bull. The manner in which this remarkable animal drew the load, with an addition of fifteen men, showed plainly that his power in a harness was great, and that he had been well trained. All which is respectfully submitted for the Committee,

JAMES STEVENS, CHAIRMAN.

## ON STEERS.

The Committee on Steers respectfully Report, that of the original Committee only one member was present, Albert Smith, of West Newbury, and the vacancies were supplied by the other names hereto subscribed.

There were but three pairs of steers presented for premiums; one pair, three years old, by Moses Pettingill, of Topsfield, which we do not think very extra for size or quality; one pair of two year old steers, by David S. Caldwell, of Byfield, which were extra for size and quality, and we consider him entitled to the first premium of six dollars. One pair of yearling steers, presented by Joseph Kittredge, of Andover, were very fair animals of that age.

The Committee very much regret that the exhibition of this description of stock was so meagre, but hope that in future more interest will be taken to make it worthy of the Society and the county.

SAMUEL ROGERS,
AMOS SMITH,
JOSEPH LUNT,
GREENLEAF PLUMMER,
NATHAN N. WITHINGTON. } Committee.

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## ON FAT CATTLE.

The Committee on Fat Cattle Report, that only two pairs of cattle were entered for beef, viz: one pair by Jedediah H. Barker, of Andover, and one by George Norton, of Essex; neither of which, in the opinion of the Committee, were of that class of stock entitled to the Society's first premium. They were good cattle, however, considering the manner and expense of fattening. We would, therefore, recommend the second premium, of eight dollars, be awarded to George Norton, for his best ox, and the third premium, of five dollars, to Jedediah H. Barker, for his best ox.

There were also entered for exhibition, by Richard S. Rogers of Danvers, two yokes of working oxen, one seven years old, the other four years, which were very fine cattle. The latter, in the opinion of the Committee, are the finest pair of cattle they have ever seen at any exhibition of stock within the county. Respectfully submitted by

ANDREW DODGE,
JOHN D. CROSS,
BENJAMIN S. WHEELER. } Committee.

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GEORGE NORTON'S STATEMENT

I enter for premium one pair of fat cattle, seven years old, girth seven and a half feet, and weigh, the off ox one thousand nine hundred and ten pounds, and the nigh ox, one thousand seven hundred pounds, being weighed this day at the town scales in Essex. They have been owned by me over six months last fast.

Their feed in winter, and until they went to grass in July, has been half English and half salt hay, with two quarts of meal apiece daily. They were kept at work all that time hauling timber—and the hardest kind of work too. They have also worked in the same way occasionally since they were turned out to pasture. I shall also enter them this day for drawing, as they are remarkably well trained and powerful.

Essex, Sept. 24, 1851. GEO. NORTON.

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JEDEDIAH H. BARKER'S STATEMENT.

The Trustees having offered a premium for the best animal fatted in the county, regard being had to the expense of the same. I offer for inspection a pair of oxen, six years old, which I bought from a drove two years ago next October. They and one other pair have done all the work upon my farm the past season, a less team than usual for me to have. My

stock in the winter varies from fifteen to twenty head of cattle. I worked said oxen since haying, as I usually do, in ploughing, hauling manure and gravel on low ground, &c.

They have had common pasture feed through the summer, and but little fall feed, it being very dry, but have had no grain whatever of any kind. Their weight is three thousand three hundred and five pounds.

Andover, Sept. 25, 1851.

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## ON BULLS.

The Committee on Bulls, Report, that there were five entered for premium, also two calves not entitled to premium.

One of them, belonging to Jedediah Farnham, of Andover, half Durham and half Devon, being in the estimation of the Committee a very superior animal, in size, form and general appearance, we unanimously recommend to Mr. Farnham, a gratuity of two dollars, if the funds of the Society will justify them in awarding the above sum.

We have awarded the first premium, of seven dollars, to Joseph Kittredge, of Andover. The second premium, of six dollars, to Joseph Henfield, of Lynnfield; and the third premium of five dollars to John Stone, jr., of Marblehead.

The bull of Mr. Kittredge, was from stock of Samuel Lawrence, Esq., while he resided in Lowell, a North Devon, and was unquestionably full blood. In the opinion of the Committee, he is a desirable animal to cross with any of our stock for working purposes, and many of the half bloods may prove good milkers. There is probably no stock in the county to uniform in color and appearance as this, and therefore it can be better matched than any other breed.

Mr. Henfield's bull is reported to be half Durham, and is probably of the stock reported. No information was given the Committee from what stock he descended. He did not show those decided marks which many of the half Durham

exhibit; he is fine dark red, in high condition, not large size of his age, and of compact form.

Mr. Stone's bull is of the Polled or no-horned breed on the side of the mother, but we believe his sire was not of that stock. He is of good size, but not in high condition. He had the appearance of being part Ayrshire.

We believe there are more no-horned cows, in proportion to numbers, that are superior milkers, than of any other race kept in this vicinity. And believing that the male will influence all the qualities of his progeny to some extent, we consider this bull may do much towards improving the milking qualities of the heifer calves, that may be raised from him. We are glad that an opportunity is offered to make the experiment.

The Ayrshire bull loaned to the Society, but now entrusted to an individual, was entered for exhibition only. He has been kept in the north part of the county, and it is believed the cows put to him (twenty or more) are with calf, and we believe the heifer calves will be raised, and the milking qualities of the breed fairly tested.

The Committee believe the time will come, and that it is not far distant, when the breeders and even owners of stock, will be more particular, and better informed than they now are, as to the pedigree of the animals they breed from and purchase. That certain races of neat stock have traits peculiar to themselves, which are transmitted to their descendants, is beyond a doubt—and that these peculiarities may be improved and rendered more permanent by attention to the most improved modes of breeding, we have abundant evidence. To profit by this, it is important not only to know we have reared a fine animal, possessing the desired qualities, but from what stock it proceeded, so that future efforts may be directed by the experience of the past.

Who is to commence this, and how it is to be conducted, and perpetuated, we do not undertake to prescribe. If it is an English practice "to keep a herd book" we believe the lovers of fine stock must come to it here, or trust more to acci-

dent, than they need to do in accomplishing their desired object. For the Committee, MOSES NEWELL.

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## ON SWINE.

The Committee on Swine, having attended to the duties assigned to them, Report, that the whole number of swine entered for premium, was thirty-one, viz: by Wm. H. Balch, of Topsfield, three; Richard S. Rogers, of Danvers, four; Adam Boyd, of Essex, eight; Benjamin Akerman, of West Newbury, ten; Jacob F. Jewett, of Georgetown, ten; Benjamin P. Ware of Salem, one; Joseph Shatswell, of Salem, two.

The Committee would award the premiums as follows:

To Benjamin Akerman, of Amesbury, for his Suffolk boar, 14 months old, 1st premium - - $5 00

To Richard S. Rogers, of Danvers, for his Suffolk boar, 16 months old, 2d premium - - - 3 00

To Adam Boyd, of Essex, for the best breeding sow, native breed, 1st premium - - - 5 00

To Moses Newell, of West Newbury, for the best litter of weaned pigs, ten in number, Suffolk and Mackey breed, 1st premium - - - 6 00

To Adam Boyd, of Essex, 2d premium - - 3 00

To Wm. H. Balch, of Topsfield, for his two best pigs, 15 weeks old, 3-4 Suffolk, 1st and 2d prem. 4 00 and 2 00

For the Committee, JOHN ALLEY, 3d.

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### MOSES NEWELL'S STATEMENT.

The litter of ten pigs, shown by the subscriber, all from a sow three years old, that has had six litters, and being in pig again, is not brought here. She is part Mackey, part No hair, and mixture of other breeds, not large boned but rather long.

These pigs were sired by a full blood Suffolk boar. At the

suggestion of friends interested in the improvement of stock, I was induced to show them, in order that it might be seen what stock this cross would produce. The whole litter is brought that it may be seen with what uniformity they may be bred. They were dropped the 5th of May, weaned at six weeks old, and fed after a few days, with ten quarts of meal per day, with the wash of the dairy. This has been gradually increased to twenty quarts. They have at no time been fed with as much as they would eat. I have shown these because I consider it a better cross than to attempt to breed from a full blood Suffolk sow. MOSES NEWELL.

West Newbury, Sept, 25th, 1851.

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ADAM BOYD'S STATEMENT.

I offer for premium my breeding sow, now eighteen months old. Also—seven weaned pigs 4 1-2 months old.

I have taken great pains in obtaining the breed, and hope it will meet with favor. The keeping has been without extra expense—being the wash of the dairy, raw apples, and a little meal daily, till two months old, since when, they have had meal regularly once a day, and within, say two or three weeks past, they have had meal morning and night.

Essex, Sept. 24, 1851. ADAM BOYD.

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## ON VEGETABLE PRODUCTS.

The Committee examined the several specimens presented, and awarded such gratuities as seemed appropriate.

When the benefits incident to this culture are taken into view, it is quite surprising, that it is not more general, and regarded with more favor. Many instances have come to our knowledge, where the proprietor of half a dozen acres only has realized more net profit, than others in possession of a

hundred acres, simply because of the superior skill in the application of labor. It is impossible to pass through the county, without being strongly impressed with the fact, that not one quarter of the lands can be said to be cultivated at all; and the further fact, that they are susceptible of producing at least four times as much as they now do. It is idle in the extreme, to think of abandoning our own soil, for the more fertile prairies of the west, until we have tested their productive powers to their full extent.

On examining the products presented, several general ideas occurred to the mind, which we think will be more useful, than extended commentaries on particular articles—many of which were of good quality—but not extraordinary.

Our attention was particularly arrested by specimens of POTATOES exhibited, viz: the DANVERS REDS, raised by Mr. John Bradstreet; and the MIDDLETON REDS, raised by Mr. H. L. Gould, (we use these names as distinctive, without authority.) Mr. Bradstreet's potatoes sprang from the seeds of the balls planted in 1845. He has continued them distinct for six years, with remarkable success, as to QUANTITY and QUALITY. We took occasion, after the show, to visit Mr. B. and to examine minutely into his culture. He has raised more than nine hundred bushels of this kind, the present year, on five acres—averaging a bushel to sixteen hills. We saw his men digging, and have no question of the fact. We have never seen potatoes of better appearance. If they prove as good on the table as they appear in the field, they will be a treasure indeed. Mr. Gould exhibited a basket of PALE RED POTATOES, which sprang from seed obtained from the Eastern part of Maine, in 1849. These we saw growing in the field, at Middleton, on the farm of Dr. A. Nichols, and have since found them good on the table. Mr. G. represents them as being very productive, yielding on an average, a bushel to twelve hills. Both Mr. B. and G. were particular in the selection of their seed, and in planting, taking care to use only sound and fair potatoes, with about three eyes in each piece, with generally three pieces to a hill. In this way, their large product is in

some measure explained. People have been heedless in planting their potatoes, both in the preparation of their land, their manure, and their seed. Whereas proper attention to each of these points, is absolutely necessary to ensure fair crops. As the exhibition afforded no specimens of the POTATO ROT, (about which so much is said, and so little understood,) we do not feel at liberty to enter upon the discussion of this topic; hoping never again to have occasion to notice it.

A beautiful specimen of the CULTIVATED CRANBERRY, was presented by Mr. J. S. Needham, of Danvers, for which a gratuity of seventy-five cents was awarded, as a compensation, for the trouble of bringing it in. Mr. Needham, and his father have given much attention to this subject, and demonstrated that the very best of cranberries may be raised on upland. We have tested their cranberries, and know this to be so. We hope these gentlemen will favor the Society, with a statement in detail of their culture; as it is an object for which liberal premiums have been offered for years, without securing any statement, affording a distinct guide for the cultivation. One thing has struck us, as worthy of special notice, on viewing Mr. N.'s bed of cranberries, that is, THE DRESSING that he applies, about the plants and between the rows; which is pulverized mud from the meadow, so as completely to cover the ground. On inquiring the reason of this, we were told, it was essential to the perfect growth of the cranberry—that the mud operated like a SPUNGE to retain the moisture necessary to support the plant. This being so, indicates very clearly, that Nature made no mistake, in growing cranberries on meadow land. And the question is, inasmuch as meadow mud is indispensable to their growth, whether it is better to grow the plants on the UPLAND, and bring the mud to them; or to continue to grow them in the meadow, and keep THE GRASSES clear from them. We would not speak unkindly of the UPLAND CULTURE of the cranberry—but if they are to cost FIVE DOLLARS a bushel on the upland, and only HALF THIS SUM on the meadow, we think the meadow will continue to be preferred, by those who would pursue the business as a self-sustaining culture.

Our tables have been loaded, from year to year, with SQUASHES of every form and variety, with quite too little notice of this branch of culture. On looking after it a little, we find in the town of Marblehead, and other places, it is one of the most profitable crops that can be raised. We know gentlemen, whose statements are worthy of entire confidence, who have assured us that they have realized two hundred dollars from the seeds only of the MARROW SQUASH, grown on a single acre, in one year. The substance of this vegetable is nutritive and agreeable to animals, as well as to men, it therefore must be an object worthy of culture. It can be grown, wherever the land is in good condition, and the vigilance of the laborer, is in ADVANCE OF THE BUGS. Nothing can be matured without vigilant care. We learn, from the best authority, Dr. T. W. Harris, of Cambridge, Mass., that it has been a prevalent opinion among botanists, that pumpkins and squashes were natives of the Eastern continent, from whence they were introduced into America by Europeans. But he is satisfied that they did not begin to be known in Europe, before the discovery of America; and that various kinds of them were found by the first discoverers and first settlers in different parts of North and South America, where they were extensively cultivated by the Indian inhabitants as articles of food. Several kinds had been introduced into Europe, before the settlement of New England. In England, they bore generally the name of PUMPKINS, from which winter squashes were not particularly distinguished by name. The word squash, originally applied to the summer squashes, is derived from the Indian name of the same kind of fruit, as we learn from Roger Williams and others. They were found at Montreal in 1535, at Florida in 1539, at Virginia in 1585, at Martha's Vineyard in 1603. Our fathers made great account of fruits of this kind. Says Capt. Johnson:—"Let no man make a jest of pumpkins, for with this fruit the Lord was pleased to feed his people to their good content, till corn and cattle were increased." So we see, that our fathers were not limited in their diet, to CLAMS and FISHES, but had a plenty of SQUASHES ALSO. On inquiry for a genuine specimen of Commodore Porter's Valparaiso squash, we were

surprised that no one was ready to speak with confidence as to its being found. Mr. Joshua Buxton, a modest but intelligent cultivator in Danvers, has furnished the best specimen of the autumnal marrow squash we have seen. If one variety is superior to another, it is important that it should be kept as distinct as possible. Animals improve, oftentimes, by crossing the breeds, but we have not known this to be the case with vegetables. On the contrary, we have known, monstrous deformities to be reared, valuable only as cumberers of the ground. We had contemplated remarks, on other classes of vegetables exhibited ; such as BEETS, CABBAGES, TURNIPS, CARROTS and ONIONS. But have time only to say, that the splendid strings of ONIONS displayed, were indicative of the superlative crops of the present season; which have grown in the town of Danvers and vicinity alone, ONE HUNDRED THOUSAND BARRELS, worth at least, as many dollars.

J. W. PROCTOR, CHAIRMAN.

The Committee recommend the award of the following gratuities:

| | |
|---|---|
| Charles A. Kilham, Wenham, sweet potatoes | 50 |
| Adam Nesmith, Beverly, onions | 25 |
| John Lowe, Methuen, cabbage | 25 |
| E. R. March, Lynn, bell peppers | 25 |
| James Friend, Beverly, crookneck squashes | 25 |
| Abraham Osborn, Danvers, California squashes | 25 |
| Daniel W. Osborn, Danvers, gourd | 25 |
| Henry L. Gould, Middleton, potatoes | 25 |
| J. M. Ives, Middleton, 4 varieties potatoes | 25 |
| Samuel Upton, Salem, squash | 25 |
| D. P. Colman, Newburyport, sugar beets | 25 |
| Amos Prince, Danvers, marrow squashes | 25 |
| David Baker, Andover, early white potatoes | 25 |
| James Abbott, Andover, box of coffee raised by himself | 25 |
| J. M. S. Neal, Salem, Canadian potatoes | 25 |
| David Jewett, Lynn, Egyptian cabbage | 25 |
| Samuel B. Osborne, Salem, Seal-foot potatoes | 25 |

R. C. Fletcher, Danvers, seedling potatoes 25
Capt. Hutchinson, Salem, mountain corn 25

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I take the liberty, of appending to this Report, a private letter just received from Dr. Harris, which will be estimated highly both from the instruction it contains, and the source whence it comes. In these days of TALK about SCIENTIFIC INSTRUCTION, I know of no purer fountain, whence it can be drawn.

CAMBRIDGE, MASS., Nov. 6, 1851.

J. W. PROCTOR, ESQ.

Dear Sir,—Last evening, your box and squashes came safe to hand. I am much obliged to you for forwarding them. The squashes are indeed "GENUINE," but not the old Valparaiso, introduced by Commodore Porter, some twenty-five or more years ago. They are the "autumnal marrow squashes," first described by Mr. Ives, of Salem, and through him recommended and introduced to general cultivation in this vicinity; and, though subject to vary and degenerate by mixture with other kinds, they have almost excluded the others from our markets by reason of their acknowledged superiority. There is, indeed, but one kind which can compare with them in goodness, namely that which is called the ACORN SQUASH, of which I shall be happy to distribute the seeds. The autumnal marrow squash is an improved variety, apparently originating from Porter's Valparaiso squash. It was first cultivated in Northampton, whence Mr. Ives procured the seeds. This summer, I raised in my garden a squash weighing twenty-five and three quarter pounds, and three feet six and a quarter inches in circumference. From my own recollection, and from descriptions given to me by others, I believe it will turn out to be the Porter Valparaiso squash. The color is blueish green, striped with whiteish lines, and irregularly varied with orange-colored blotches. But color is of less importance and less constant than other characters. This squash has a little knob at

the blossom-end, formed by the base of the pistil, which remain permanently attached. In most other kinds of squashes the pistil falls off with the blossom. My squash, moreover, seems to be the CUCURBITA MAMMEATA, described by Molina as a native of Chili, and named on account of the nipple-like tubercle at the end. The fruit-stem is precisely like that of the autumnal marrow squash, which also is surmounted at the apex by a little tubercle.

I hear very little complaint of potato-rot. In the year 1847, I bought my supply of winter potatoes of a Mr. Sherman, of Lincoln. They were called the St. Helena potatoes; and out of fifteen bushels, there was not one rotten one. So much pleased was I with them, that I got a supply of them for the winter of 1848–9, and they also proved excellent and free from rot. In the autumn of 1849, I was told by a man from Lincoln, that the rot had taken the St. Helena potatoes in that town, and I was afraid to purchase the same kind. The information I have since learned was not strictly correct. Mr. Sherman lost very few of his St. Helenas by decay. This autumn, I have again purchased the same kind of him, and he tells me that they have not been at all affected this year, and but very little for two years previous. Some time in the spring or summer of 1849, I wrote an article concerning the insects supposed to produce the disease in potatoes, and made some remarks on the cultivation of these vegetables, and on the St. Helena variety. My article was printed in some newspaper, but I have in vain looked for it, though desirous to refer to it again. I suggested, that perhaps the St. Helena potato might be constitutionally so vigorous and hardy, as in great measure or wholly to resist the attacks of the disease. So far as I can learn, my suggestion seems to be verified. If you have not already tried this excellent kind of potato, permit me to recommend it to you.

It is to be hoped that those cultivators, who have observed the prevalence of insects on their potato-vines this summer, will favor the public with the results. We hope to have accounts from all quarters, where the insects have prevailed, of the condition of the crop after digging. In some fields in this vicini-

ty, where I saw the black flea-beetle and some aphides on the potato-vines in August, I do not hear of any disease having been found in the crop when dug. It was feared that the disease would follow the copious rain that fell in September; but the crop does not seem to have been affected thereby. How do these remarks agree with your own observations? Will the Lowell gentlemen give the result of their experience on the insect theory? I suspect that when farmers make their returns, if they speak to the point in full, the insect theory will be overthrown entirely.

Yours, truly, and respectfully,

THADDEUS WILLIAM HARRIS.

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## ON FRUIT.

The Committee on Fruits and Flowers respectfully Report, that notwithstanding the prediction of many that our Show of the Fruits would be small, owing to the Horticultural Exhibition of the Essex Institute coming off on the same day, and although we did not expect many contributors from this city, still we were highly gratified with the varieties presented, which exceeded our expectations. Peaches, pears, apples, plums, and grapes, would favorably compare with any previous year, particularly the fine peaches and pears from Mr. Pettingill, of Topsfield. The pears grown upon his farm have convinced us that the finest Flemish varieties can be grown successfully in the country, unprotected by brick walls or fences. These pears are simply planted out in his peach orchard, which gives a mutual protection to each kind. Further remarks relative to the soil, sub-soil, mode of culture, &c. &c., will appear in the printed Report, as well as a catalogue of all the contributors. There were five hundred fourteen plates of fruit from seventy-seven contributors. The following gratuities were awarded by your Committee:

To Moses Pettingill, 3 00. Moody Ordway, 2 50. W. G. Lake, 3 00. David Roberts, 2 00. Stephen Driver, 1 50.

Samuel Sawyer, E. R. Mudge, G. Sparhawk. James B. Goodhue, N. Bodwell, Wm. Stearns, Andrew Dodge, Rufus Slocumb, one dollar each.

To Augustus D. Rogers, 2 00. A. W. Dodge, George Andrews, S. B. Ives, Eben Rowe, 75 cents each.

To Daniel Putnam, E. S. Parker, I. Arrington, Porter Gould, Warren Shelden, D. S. Caldwell, Elijah Chase, Abel Burnham, Rev. Mr. Pratt, Dr. Sanborn, David Nevens, 50 cents each.

To Wm. R. Cole, Daniel Richards, Olphert Tittle, Henry Poor, M. Prince, D. Barker, Levi Burnham, 25 cents each. To Mr. Needham, for Cranberries, 75 cents.

## ON FLOWERS.

| | |
|---|---|
| To Mrs. Pettingill, of Topsfield | 2 00 |
| " F. A. Hooper of Marblehead | 1 00 |
| " Miss R. S. Ives, of Middleton | 50 |
| " Miss Caroline Baker, of Andover | 25 |
| " Miss Sarah H. Ropes, of Salem | 25 |
| " Miss Susan H. Ropes, " " | 25 |
| " Mrs. John W. Downing, " | 50 |
| " Mrs. Stephen Driver, " | 56 |
| For the Committee, | JOHN M. IVES. |

## ON STALLIONS.

The Committee on Stallions have attended to the duties assigned them, and are happy to say, that the horses exhibited for premium, in their opinion, are far superior to those of any previous season. They regret that the regulations of the Society will not allow them to give but one premium, as there were several horses well deserving a premium. But as one only can be awarded, they award that to Mr. J. B. Phillips, of Lynn, for his four years old Messenger colt.

JEREMIAH COLMAN, } Committee.
WILLIAM OSBORNE. }

## BREEDING MARES.

The Committee on breeding mares Report, as follows :—

The number entered this year was much less than the last, being but four. After having examined the animals entered with as much care as time and circumstances would permit, they were unanimous in the opinion that no premium should be awarded. Upon the printed bill they find a general direction given by the Trustees to all Committees, not to award a premium unless the article or animal entered, is of a decidedly superior quality. The Committee are of opinion, that a mare for breeding, should be free from any permanent lameness, such as ring bone, spavin, or founder, or any other material unsoundness. There can be no little doubt that there is much risk of the transmission of those infirmities, in some form or other, to their offspring. Other qualifications are also important. Without attempting a general description, they would allude to a few, such as, good size, kind disposition, good form and action, and last, though not least, that she should be an easy and quick traveller. Since the invention of steam, as a moving power, by which we are moved along with great ease and rapidity, we have not patience in a carriage with a horse that can move but five miles an hour.

More horses are now raised in the county of Essex than formerly. But little attention seems to be given to improving the breed. But few of our most valuable mares are put to breeding, until, by high feeding, and over driving, they become of but little value; then put to breeding. The first cost of a colt from good stock is small compared with the after expense of keeping until old enough for use. The price of good horses in market, has doubled within the last twenty years. If prices thus continue, (and to us there seems no reason why they should not,) with good stock as breeders, horses might be raised in this county, at as good profit as other stock. There might much be said also, on the importance of the male parent. But that subject is in the hands of a Committee who without doubt will do it justice. The Committee take the liberty to suggest, that if the trustees continue the offer of

premiums that there be more liberal sums offered as a means of improving the breed and thereby increasing the profits of those who breed.

DEAN ROBINSON, CHAIRMAN.

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## ON COLTS.

The Committee on Colts award the following premiums :

For the best four years old colt, to Seth Kimball, of Bradford. $6 00

For the second best four years old colt, to N. Boardman, of North Danvers. 4 00

Por the best three years old colt, to Samuel C. Pitman, of Lynn. 5 00

For the second best three years old colt, to Richard P. Waters, of Beverly. 3 00

For the best two years old colt, to Benjamin F. Jenkins, of Andover. 4 00

For the second best two years old colt, to Josiah Crosby, of North Andover. 2 00

For the best yearling, to Josiah Crosby, of North Andover. 3 00

For the second best yearling, to Jacob Farnham, of Andover. 1 00

The exhibition of colts was unusually good, and although the Committee were not able to award any more premiums, in compliance with the vote of the trustees, they were glad to see that an increasing interest is every year felt in the rearing of these valuable and useful animals.

The Committee would notice a fine stud colt, three years old, presented and owned by Josiah Crosby, of Andover, as a superior animal, which will be kept in the county, but was not entitled to a premium on account of not being reared within the county. On behalf of the Committee.

WILLIAM CHASE, CHAIRMAN.

## ON HEIFERS.

The Committee on Heifers respectfully Report, that twenty-one animals were entered for exhibition and inspection, eighteen of which were for premiums, entered by fifteen individuals. The animals were generally of a superior class, and evinced a due regard in the farmers of the county, to the selection of stock.

But one animal came within the limits of the class of heifers in milk; and to the owner, Josiah Crosby, of Andover, we recommend the second premium, of six dollars, be awarded for his two years old Devon and Ayrshire heifer; they also recommend that a gratuity be given, of five dollars, for his three years old heifer, exhibited with her first calf, of eight days, to James P. King, of Danvers. For two years old heifers, the Committee recommend the follow premiums:

| | |
|---|---|
| To Nathaniel Kelly, of Salem, 1st premium | $5 00 |
| " I. Osgood Loring, of Andover, 2d premium | 4 00 |
| " " " " " 3d " | 3 00 |

There were more yearling heifers than of either of the other two classes, and the animals of a good character, and so near in the estimation of the Committee were the merits of the several animals, that we came to results with more difficulty; the Committee, however, recommend that the premiums be awarded as follows:

| | |
|---|---|
| To Isaac Prince, of Beverly, 1st premium | 4 00 |
| " Warren Trask, of Danvers, 2d premium | 3 00 |
| " David S. Caldwell, of Newbury, 3d premium | 2 00 |

They also recommend that a gratuity of two dollars be given to Joseph Kittredge, of Andover, on his one half Devon yearling heifer.

For the Committee,

JOSIAH LITTLE.

## ON THE DAIRY.

The Committee found the specimens of June Butter, such as to compare favorably in numbers, and excel in quality those offered on any former occasion in the county.

The specimens of September butter were but five, and did not come up in quality, to the September butter offered at our Shows heretofore. There was some doubt in the minds of the Committee, in regard to awarding premiums on this butter; but on mature deliberation, they concluded its quality was the effect of the drought and want of green feed in pastures, and not the fault of the butter makers, and that premiums should be given.

The several parcels of butter, and the statements, were numbered, and the premiums awarded before the Committee knew by whom the butter was made.

Two boxes of butter marked X, which were of a very superior quality, were offered and examined, but as no such accompanying statement as the rules of the Society require could be found, a premium could not be given.

Two cards marked "Richard S. Rogers, Oak Hill Farm, Danvers," enclosed in two envelopes, superscribed, "X, dairy butter, two boxes," indicated the person by whom the butter was presented. The butter, with a favorable statement of the product of the dairy on the farm, was clearly deserving a premium; and if Mr. Rogers has failed for the want of a statement, it is hoped he will persevere in well doing, and come better prepared at our next Show.

It should be distinctly understood that the premiums are offered for the best product on a farm, which cannot be decided without comparing statements, about one fourth of which are defective.

But two lots of cheese were entered. Lot No. 1 contained but two cheeses, which the Committee judged did not weigh the requisite number of pounds, and as the statement gave no account of the product of the dairy on the farm, it was re-

jected. The Committee recommend the premiums to be awarded as follows:

FOR JUNE BUTTER.

| | |
|---|---|
| To John Preston, of Danvers, 1st premium | $10 00 |
| " Jonathan Berry, of Middleton, 2d premium | 8 00 |
| " Benjamin T. Lane, of Danvers, 3d premium | 6 00 |

FOR SEPTEMBER BUTTER.

| | |
|---|---|
| To Jonathan Berry, of Middleton, 1st premium | 10 00 |
| " John Preston, of Danvers, 2d premium | 8 00 |
| " Benjamin T. Lane, " 3d " | 6 00 |

FOR CHEESE

To Paul P. Pillsbury, of Andover, 2d premium.

For the Committee, D. S. CALDWELL.

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JOHN PRESTON'S STATEMENT.

I present for inspection a jar containing twenty-eight pounds of June butter, a sample of one hundred and sixty-seven pounds, made from the milk of four cows, from June 1st to July 9th.

Also—a box of fifteen pounds of September butter, a specimen of three hundred and fifty-two pounds, made from May 23d, to September 23d, from the same cows. We have used and sold four quarts of milk per day. It is probable the cows did not yield so large a quantity within the above named dates as they might have done, had not two of them come in so early as February 20th. Previous to making butter, these two cows fattened six calves for the butcher, the other two one each, making eight calves fattened by the four cows, previous to May 20th, which were sold for $51 20, averaging $6 40 each. The cows have had common pasture till August 1st, since then corn fodder.

PROCESS OF MAKING.—The milk is strained into tin pans, and placed on the bottom of a cool cellar. It is skimmed in about thirty-six hours. The cream is put into stone jars, and kept

in a vault till it is churned. Churn twice a week. The butter-milk is worked out thoroughly: and the butter salted, the June with one ounce, and the September butter three fourths of an ounce to the pound.

Danvers, September 25, 1851.

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JONATHAN BERRY'S STATEMENT.

I present for inspection twenty-five pounds of June butter, being a sample of two hundred and seventy-five pounds, the product of five cows, from the 20th of May, to the 9th of July. Also, seventeen pounds of September butter, a specimen of six hundred and eighty pounds, made from the 20th of May, till the 23d of September, from 7 cows. The feed of the cows has been a common pasture; since the 1st of August, they have had green corn fodder.

Process of Making.—The milk is strained into tin pans, and set in a cellar prepared for that purpose. After remaining from thirty to forty-eight hours, the cream is taken off and kept in a vault till it is churned. Churn once a week. The butter milk is worked out by hand, and the butter salted with about one ounce of salt per pound.

Middleton, Sept. 25, 1851.

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BENJAMIN T. LANE'S STATEMENT.

I present for inspection one pot of June butter, containing twenty pounds, being a sample of one hundred and ninety-two pounds, made from six cows, from May 30, to July 1st. Sold and used in the family, five quarts of milk per day. Also, one box of September butter, containing twenty-one pounds, a sample of five hundred and eighty-one pounds from the same cows, with the addition of two more, one the 2d of July, and one the 14th of July, from the 20th of May, to the 20th of September; and I sold in the time six hundred quarts of milk, and ten quarts of cream, and averaged one quart per

day in the family. The feed of the cows has been common pasture, until the 10th of August, when I commenced feeding them with green corn twice a day.

PROCESS OF MAKING.—The milk is strained into tin pans, and set in a cool cellar, and after remaining there from thirty-six to forty-eight hours, the cream is taken off and put in tin or stone pots, and set on the bottom of the cellar till ready for churning. We churn twice a week. When the butter is formed, the butter-milk is drawn off, and the buter is washed twice in cold water; it is then taken out and salted with 3-4 ounce of salt, and 1-4 ounce of loaf sugar to the pound. After standing twenty-four hours, it is again well worked, and weighed into pound lumps ready for market.

Danvers, Sept. 25, 1851.

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PAUL P. PILLSBURY'S STATEMENT.

I present for inspection three cheeses, weighing sixty-five pounds, made from the milk of two cows. In the month of July, we made ninety pounds of new milk cheese, and sold three hundred and twenty-six quarts of milk; from the 1st of August to the 20th of September, we sold eight hundred quarts of milk, making in the whole, 1126 quarts of milk all sold, at four cents per quart, $45 04. The feed of the cows was grass only. They calved about the middle of May. The age of the cows is, one four, the other seven years.

PROCESS OF MAKING.—Set the milk warm from the cows; then allow one gill of rennet to four pails of milk; let it remain fifteen minutes, then cut it with a knife, that will reach the bottom of the tub; let it remain again, until the whey begins to appear; then dip it into a basket to drain, then put it into a cool place to remain until the same process is performed again; then cut the several curds in small pieces, warm them in whey fifteen minutes, salt wholly in the curd, about a table spoonful of salt to a pail full of milk; press it two days,

turn it twice a day ; then put the cheese into an airy room, and turn them, and butter them once a day.

Andover, Sept. 25, 1851.

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## ON IMPROVING PASTURE LANDS.

It is to be regretted, that there has been no application for premium the present year, on this important subject. I say important, because I think pasture land has hitherto been more neglected than other lands, and its value has not generally been appreciated. I think that good pasture land will produce as much net income, reckoning it at the price at which it is usually valued, as other lands.

It appears from statistics officially taken in 1850, by the authority of the state, that there are in the county of Essex ninety-eight thousand eight hundred and fifty-seven acres of pasture land, and that it will keep, with the fall feed on the farms, nineteen thousand three hundred and six cows, taking a fraction over five acres to keep a cow, on an average. Now as there are some pastures where from one to two acres will keep a cow, consequently we may suppose there are others that will take seven or eight acres. The difference in the amount of feed produced on good pasture land and poor, is not all. The quality of the feed is much better on good pasture land than on poor, for as the pasture improves, and the English grasses increase, the wild grasses decrease. And this is not all, for where it takes seven or eight acres to keep a cow, the feed is so thin that an animal is necessarily feeding nearly all day to supply the wants of nature, while those kept in good pastures, can quickly supply their wants and then retire to the shadow of the tree to protect them from the scorching sun, or if they choose, refresh themselves on the adjoining knoll.

Now for the comparative profits of the animals. If cows, there will be a great difference in the quantity and quality of the milk. And in autumn, the one kept in the good pasture will be in much better condition than the other. If the animal is

designed for beef, one will be ready at almost any time, when its high price or other circumstances require its sale, while the other, if sold at all, will be deficient in quality and weight.

Now the question is, how can pastures be improved with such limited expense that the additional income will repay, or more than repay the outlay; for unless this can be done, it is not considered profitable farming. This, I find, is the most difficult part of the subject. There is so much difference in soils, in locations, and in the circumstances of the owners of the soils, that it is difficult forming a general rule; but all these things should be taken into consideration, for what is profitable in one case, might not be in another.

And first, I would say, that pastures should not be fed too close, as close feeding tends to bind them out. Some pastures may be profitably improved by the ordinary manner of cultivation and manuring, others, by top-dressing with compost manure, and others by ploughing, sowing with rye, and hay seed, and feeding the rye, instead of cutting it. But pastures cannot be improved in this way but to a limited extent, for most farmers want nearly all their manure for their mowing land, and many pastures cannot be conveniently ploughed, in consequence of hills, rocks, and other obstacles. Leached or dry ashes do well on some lands, but these cannot be procured but in limited quantities.

The best and cheapest way of renovating pasture lands, is by using gypsum on such land as is benefited by it. It can be procured in any quantity, will cost but about 30 cents per bushel, and will require about one and half or two bushels to the acre, per year. Some land, however, receives but little or no benefit from it. And some farmers object to its use, on the ground that of itself it affords the plant no nourishment, and that, consequently, it will injure or exhaust the land. Now, in reply, I would say that I am no chemist, and shall not attempt to give the why or the wherefore in regard to its operation, but would simply say that I have seen its effects on pastures for more than thirty years, without ploughing or any other dressing, except what has been dropped by the cattle, and they are now among the best pastures in the vicinity. And further, if pas-

tures can be improved six fold, as I have often seen them, then there will be six times the droppings from the cattle, and who has not seen the good effect of the droppings of the cattle, especially the liquids? It may be seen for years.

I would earnestly reccommend that farmers give gypsum a fair trial, not only on one piece of land, but on different parts of the farm, for although it may not benefit one piece of land, it may an adjoining piece. On the whole, I know of no better way than to improve the best pasture land so far as the extra income will pay the expense. Those old worn out pastures that cannot be improved without an occasional draft on the purse to pay the expense, over and above the income, may as well go for wood, if wood will grow on them; if not, let them remain as they are, until they can be turned to some better purposes.

In closing, I would again say, as I have before said, that it is an important subject, and I am gratified that a premium has been offered, although there has been no application for it. I hope that the suggestions here made will be the means of inducing others who have had more experience than myself, to use the pen, and give their opinion on the subject, and I trust that good may result from it.

JOSEPH HOW, CHAIRMAN.

Methuen, November 15, 1851.

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## ON RECLAIMED MEADOW LANDS.

The Committee on Reclaimed Meadow and Swamp Lands, report:

As early as the year 1750, the attention of some farmers in this county, was turned towards the improvement of their wet meadows. A part of Bishop's meadow, (so called,) in North Danvers, was then ploughed and sown with grass seed, and for some time yielded large crops. But the improvident waste of the forests by the early settlers in this country, made it neces-

sary for many, at the close of the last century, to resort to their peat meadows for fuel; and this reclaimed meadow was then dug out for peat. But the general use of the cooking stove, and the introduction of hard coal for fuel, have lessened the consumption of peat within the last thirty years, and peat meadows are not now so valuable for fuel, as they were forty years since. It becomes an important inquiry then, how they can be best reclaimed?

It has been the practice of many, in former years, to cart upon them large quantities of gravel. This was done many years ago upon some ten or twelve acres of the farm in Danvers, now owned by George Peabody, of Salem, and although these meadows have some of them been reclaimed more than forty years, they continue to produce large crops of hay.

But where meadow lands are so situated that they can be drained, they may be reclaimed without the expense of gravelling, as the statements of the two applicants for premiums this year show.

In draining land, it is important to know how much the water should be lowered. From our experience, we should say, that the ditches and outlet should be so made, as to drain the water eighteen inches below the surface of the meadow, in the spring, and the early part of summer. As the season becomes dry, it may be well to stop the ditches, so that the water may rise to within twelve inches of the top. We have sometimes seen the evil effects of draining these lands too dry for grass.

If we cannot drain the stagnant water from a meadow, it is not desirable to attempt to reclaim it. We saw a strong illustration of the truth of this remark, when viewing the meadow of Mr. Ware, in Marblehead. A neighbor of his wishes to keep his pond at its present height, and to reclaim his meadow. He keeps the water in the pond, but his meadow does not stay reclaimed, although he has expended much upon it. On the farm of the late B. W. Crowninshield, of Topsfield, we saw another illustration of this remark. He had done much upon his meadow, but his neighbor demanded an exorbitant price for digging a ditch a few rods through his pasture, so that the

water stands so much upon it, that it kills the English grass.

Both of the pieces of land to which our attention has been directed, were what is comonly called Swamp Land, and were nearly alike in what they produced; although they were differently situated. Mr. Kimball's farm is far from any village or market town, so that he has no means of obtaining manure, except what is made upon the farm. This being the case, a reclaimed meadow is valuable, not only for what it produces, but as furnishing the means by which other parts of the farm may be improved. The manure which may be made from the stock fed upon the ten tons of hay produced upon this meadow, will add much to the means for enriching his other lands.

From his experiment we learn how that one of the most uneven, unproductive and worthless swamps may be converted into a smooth and beautiful meadow, for less than forty dollars per acre.

We think, after reading the statement of Mr. Kimball, no one need to be deterred from trying to improve his meadow, because it requires such an outlay of capital. If many more of the foreigners who are coming to our shores by thousands, were employed like the one who improved this swamp, they would do much towards developing the resources of the country. In this way, they might do something towards relieving us of the taxes which are imposed upon us for their support.

We saw, when at Mr. Kimball's, that his cows and apple trees were being benefitted by his reclaimed meadow; for instead of feeding his cows upon coarse meadow hay, he puts it around his apple trees, which gives them a smooth and healthy appearance; its usual effects upon cows need not be named.

We hope that many of the neighbors of Mr. Kimball will be induced by his experiment to go and do likewise.

Mr. Ware's Swamp is situated in Marblehead. Its proximity to the sea shore, and the large towns, enables him to obtain manure from other sources, than the stock of his farm. From the appearance of this swamp we should think that it had never produced a large growth of wood, and that at no very remote period, it formed a part of the pond.

He thinks that when he lowered the water in the pond

three feet, the swamp settled two feet; so that the pond is not now more than one foot lower than the meadow. When he has completed his ditches so that he can have the control of the water, we think this meadow favorably situated for the production of grass. We do not know what will be the effects of the kind of manure applied to this land, for coming years, but the produce this year has been extraordinary, for seed sown last spring. From what we saw, our impression is, that it causes the grass to grow so fast that it will not stand up, to produce a large crop, but will have to be mown often. This will be no objection to one who is situated as Mr. Ware is, and wishes to use his hay for making milk. We consider a reclaimed meadow peculiarly valuable upon a milk farm; as the early cut hay and second crop will make a greater flow of milk than well ripened hay.

Whatever may be the intrinsic worth of reclaimed meadows compared with other parts of the farm, we think that any one who has reclaimed a worthless meadow will have something of the feeling of the man in the parable of the lost sheep; he will rejoice more over that acre, than over the ninety and nine which needed no reclaiming.

The Committee unanimously award:

To Samuel Kimball, of Boxford, first premium, $15 00

" Horace Ware, 2d, of Salem, second premium, 10 00

WM. R. PUTNAM, CHAIRMAN.

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SAMUEL KIMBALL'S STATEMENT.

The swamp land recently viewed by the Committee, was surveyed in June, 1851, and contains 5 1-80 acres, including ditches, which occupy 17 rods of the surface.

Most of it has been a dense growth of pine and maple until within the last seven or eight years. During the winter of 1846, all the wood of any value then remaining on the swamp, was taken off. The original growth on a part of this swamp

had been removed many years since, and nothing of value had grown from it. Dogwood, alders, the blueberry and many other kinds of bushes, together with brake, moss, and meadow cabbage, being the principal growth.

This swamp has a peat bottom, some parts of it being soft; so much so, that no beast of goodly size could travel over it. Peat had been taken from the highest part of it, though it was with difficulty, on account of water.

In June, 1847, I concluded to drain the swamp in order to clear it of standing water, resolving to reclaim it at some future time. I accordingly employed a man to dig a ditch for that purpose, which cost fifteen dollars and forty cents. I saved twenty cords of peat, taken from this ditch, which I sold, leaving me one dollar per cord, exclusive of all expense.

In June, 1848, I began the work of reclaiming. I hired a man well adapted to the business, for twenty dollars per month, including board; and with bog hoe in hand, and a good muscular arm, he commenced business. The whole surface of about an acre and a quarter of this swamp was well cut and carefully turned by him, (except the stumps and roots) it being very important to have it well dried by exposure to the sun and wind. In the years 1849–50, the same course was pursued in regard to the remaining three and three quarter acres. As much of it was turned in this way as possible, previous to August, to enable us to burn it the more easily during that month. After burning the top, all the roots and stumps were removed and piled, to be taken of in the winter. Cross ditches were then dug of about one and a half feet in depth, and of the same width, making the beds about three rods in width. Having completed the beds, we seeded down the same to herds grass and red top. In 1847, my man was at work on the swamp sixty-seven days, which, at seventy-seven cents per day, would be fifty-one dollars and fifty-nine cents.

The second year there were one hundred and thirty-four days' labor expended, at seventy-seven cents per day, amounting to one hundred and three dollars and eighteen cents.

The third year there were eighty-four days' labor expended

at seventy-seven cents per day, amounting to sixty-four dollars and sixty-eight cents.

From this reclaimed piece, I collected at least thirty cords of wood, consisting principally of pine roots and stumps, which I judge were richly worth one dollar per cord, after being piled on the swamp. The old turf ditches were filled with stumps and sods and then a thin coating of gravel was put on the whole of it, say one half of an acre.

After I had seeded down the first acre and a quarter, apprehending a failure of the seed, in the early part of the spring of 1849, I sowed one bushel of spring rye, which yielded a very large crop of straw, and thirteen bushels of grain; and the grass that subsequentiy grew so thickly, showed that my previous apprehensions were groundless.

The following year, the same piece yielded, in the opinion of competent judges, two tons of good hay to the acre. I also, for the first time, mowed the piece seeded down in 1849, consisting of about two and a quarter acres, and obtained for the first crop a ton and a half per acre. I also mowed one ton of rowen from the above pieces. During the present year, 1851, from the whole piece nine tons of good English hay have been taken, with the exception of one half acre not seeded down till last March. From the whole piece I have taken this fall, not far from one ton of rowen.

The principal top dressing for the land consisted of the ashes obtained from the burning of the top surface. On the turf ditches gravelled over, I put fifteen cart loads of compost manure. During the last winter, I put twenty cart loads of compost manure, principally upon the piece first seeded down. I have applied no other and no more manure. On the whole five acres I sowed two bushels of Timothy and five of Red Top. The proximity of the meadow to my barn, (within forty rods distance,) makes it in its present state exceedingly valuable: and my neighbors concur in the opinion that originally, the now beautiful meadow was a very unsightly, uneven and unprofitable piece of land and water.

Boxford, October 18, 1851.

HORACE WARE, JR.'S STATEMENT.

The piece of meadow that I offer for inspection, contains two acres and two thirds, and was purchased by me in January 1849. It was considered at that time worthless, as far as the crop produced, related, being a foul swamp of briers and bushes, with the margin cut full of holes and ditches; the water standing nearly level with the surface of the land adjoining it, being a pond containing five acres.

My first step was to clear the brush from off the land, which was done that spring. In May, I made a ditch from the pond and took away about three feet of the water. In September, I dug a ditch around the margin of the meadow, about four feet deep and two wide, and filled it up two feet with stones, which cut off the high springs most effectually.

I next ploughed it by means of a long rope attached to the plough, with the cattle on the high land; the swamp being too soft to bear them. I then removed the roots and hassocks, useing them to fill up the ditches and holes, and also to build out the edge of the meadow into the pond, to make it even and fair.

The next spring, as soon as it was thawed about two inches, I harrowed and planted potatoes, manuring them with rock weed and kelp green from the sea. My crop was not great, yielding about seventy-five bushels to the acre, worth one dollar per bushel.

In the winter of 1851, I hauled about forty loads of vault manure and mixed with gravel, one part manure to three of gravel, and spread it on, about one and a half to two inches deep. In the spring, as soon as the frost was out four inches, I harrowed and cultivated, to mix the gravel with the mud, and sowed grass seed on the 20th of March, viz: one and a half pecks herds grass, three of red top, and five pounds clover seed.

In June, three months after sowing the seed, I mowed the grass which was badly lodged, and got one and a half tons of hay to the acre.

I have since cut the second crop, which was about three

fourths of a ton to the acre, and there is now a fair prospect of there being as much more for the third crop, making in all, three tons of hay to the acre. The expense of reclaiming this meadow has been about $75 per acre, leaving a balance in my favor of three tons of hay, which may not be so great as some have done, but is better than nothing.

Salem, September 24, 1851.

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## ON GRAIN CORPS.

There is, at the present time, no subject, which is, or ought to be, more interesting to the farmers of Essex County, than the cultivation of wheat and rye. Crops, which have been considered by so many cultivators of the soil here, so liable to blight, as to be unworthy their labor and attention. But the statements of claimants for the premiums now offered for the best experiments on these grains, and others heretofore published in the transactions of the Society, tend to show, if they do not prove conclusively, that such notions are erroneous. If the soil be well chosen, well pulverized, and well manured, a good crop of winter rye, and we believe winter wheat also, can be calculated on with as much certainty as other crops, on which our cultivators place their chief reliance.

It is certainly of great importance to the agricultural prosperity of this county, that the farmers should be able at least to raise sufficient bread stuff for their own consumption. Wheat has become an almost indispensable portion of the diet of the people, who pay very seldom less, generally more, than one dollar and fifty cents per bushel for the wheat, which in the form of flour they purchase and consume. Now, if such crops of wheat as have of late years rewarded the farmers of Andover, Methuen, and West Newbury, can be generally obtained, viz: 18, 22, 25, 28, and 35 bushels to the acre, under a culture no more expensive than has been there practised,

it must be obvious that it promises to reward the cultivators, as well as most crops on which they have hitherto placed their chief dependance. It would seem that it is spring wheat which has brought the culture of it into disrepute. It did so to some extent, we learn, in Maine, where the culture of winter wheat is now so successful. Fall sown, or what is called winter wheat, is, as far as we learn, every where more productive and less liable to blight and other causes of failure than that which is sown in the spring. And from reason and analogy, we should presume it would be so.

Annual weeds injure but little fall sown grain, and winter rye is certainly more productive than that sown in the spring. The culture of wheat in England and on the Continent of Europe, on soils which, like our own, require the restoration in the form of manure of some of the elements of fertility in general, or which are specially needed by wheat, affords better rules for our study, than the practice of those in our own country who cultivate virgin soils. I see no reason why the following, extracted and abridged from Low's elements of agriculture, are not nearly as well adapted to New England as they are to Old England. After enumerating and describing the various kinds of wheat cultivated in Great Britain, he says: "Of the species which have been enumerated, greatly the most important in the rural economy of this country is the winter wheat.

Wheat is of very general cultivation on all classes of soils. But the soils best suited to it are those which are more or less clayey. So peculiarly is wheat suited to the stiffer soils that these are familiarly termed wheat soils. The soils of the lightest class are the least suited to wheat—and are better devoted to other cereals, rye, oats, &c. As wheat is the most valuable of cereals, so it requires greater care to produce it It is an error to sow with a corn crop any land which is out of order, but this error is greater and more hurtful in the case of wheat, than of the other cereals. Wheat is always sown before winter, when the land can be prepared to receive it. The best period for sowing is from about the middle to the end of September. The early part of October is well suited to the sow-

ing of wheat, and it may be continued to the middle of November. When sown broad cast the land must receive several harrowings, but no more than are sufficient to cover the seed, it being better in the case of wheat that there be a certain ROUGHNESS OF THE CLOD. No sooner is the harrowing executed, than the land is to be water furrowed in the following manner: The common plough with one horse is to pass along the open furrow, and then along the open furrows of the head lands, and to draw open furrows into such hollows of the field as water might stagnate in. A person is then to follow with a spade, to clear out the open furrows of the head lands, to make channels through the head lands to the ditch, where necessary—to clear out the cross furrows to the hollows, so as to allow the water to run—and to open up the intersections of the open furrows and those of the head lands.

The quantity of seed usually sown is from two to three bushels to the acre. In case of summer fallow, the quantity need not exceed two bushels (and so likewise in well manured land from which a summer crop has been taken.) In the spring about three bushels are sown. The seeds, previous to being sown, undergo an operation peculiar to wheat—termed pickling or steeping—TO PREVENT A DISEASE, TERMED SMUT. The best substance that can be employed for this purpose is stale urine. A very strong pickle of salt dissolved in water, may be used, but salt brine is not quite so secure a means of destroying the infection, as urine. The process of steeping may be thus performed. Let a tub be provided, and partly filled with urine, and let a quantity of wheat, as a bushel, be put in at a time. Let the wheat be well stirred, and all the lighter grains, &c., skimmed carefully off, and thrown aside as useless. The wheat should remain from five to ten minutes, BUT NEVER MORE THAN TEN MINUTES, in the pickle. The successive portions of wheat thus pickled are to be allowed to drain a little, and then to be laid on the barn floor in layers, hot lime (lime slacked at the time,) being at the time sifted upon each layer. The purpose of the lime is to dry the grain, which should be carried immediately to the field and sown. When from any cause it is not practicable to sow the wheat for a

day or two, it should be spread thinly on the floor, but never kept in sacks, lest it ferment and its vegetative powers become injured.

[Grain perfectly clear and free from smut, may do well without undergoing this process. But the fertilizing effect of this steeping may more than compensate for the expense and render assurance doubly sure against the disease in question.]

Wheat sometimes becomes too luxuriant in spring, especially when sown early—and then it is apt to become lodged and run to sraw more than to produce grain. In this case it may be pastured, for a short time, with sheep.

The produce of the crop varies greatly with the seasons, the nature of the soil, and the mode of cultivation. A fair crop may be held to be thirty bushels per acre. The average crop of England does not perhaps exceed twenty-two bushels, and that of Scotland twenty-five. The weight of the straw is reckoned to be about double to that of grain. As provender, that is a feed for cattle, wheat straw is considered inferior to that of oats—better than that of barley. In other countries of Europe, it is that which is most esteemed for provender, being generally reduced to chaff. Wheat is subject to various accidents, and diseases, and insects, some of them peculiar to itself. But as no remedy for any of these, except the smut, is suggested by our author, we here close our quotations and refer the reader to the book itself for many other interesting remarks. It is No. 62, of our agricultural library.

The remarkable success of Benjamin Rodgers, of Andover, renders his statement specially interesting. The use of leached ashes, which contain much lime and plaster of Paris, is well worthy of notice. Farmers in many parts of Essex, we know, have little faith in the value of the latter article as a manure, but they may be in an error. The effect of gypsum is undoubtedly greater and more obvious in some places than in others, But it by no means follows that it does no good in the latter places. It may well remunerate for the expense which is comparatively trifling, where its benefits are not obvious, and we should recommend its use in all cases on wheat

land, in addition to other measures.* Ashes, leached or unleached, should not be omitted. Unleached ashes are often too caustic when applied fresh to growing plants in too large quantities. Hence, with many, they are in less repute than leached ashes. But since we know that potash makes an excellent compost manure with meadow mud, we must believe that the soap boiler extracts from ashes what is far more valuable to the farmer, than the lime is, which he adds to them. Clayey lands are best suited to wheat crops. Hence we infer that clay on light sandy soils would prove an excellent manure for wheat. It is well worth the experiment, and should it prove beneficial, the Railroads which pass through clay beds might be advantageously used, to convey it to lighter soils in the vicinity of their lines. It would doubtless more permanently benefit such lands than more costly and more perishable manures.†

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## RYE.

On the culture of Rye, the statements of the claimants now before us, are unusually valuable. They come from different parts of the county, and show a difference in the preparation of the land, the quantity of seed sown, and in the product obtained, worthy of careful study and consideration. For more convenient reference we have reduced their results to a tabular form.

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| E. Brown, | 1 | acre, | seed | 1½ | bush. | Product | 48¼ | bush. | or | 2796¼ | lbs. |
| D. Cogswell | 1 | " | " | 1 | " | " | 38½ | " | | 2329 | " |
| A. Page | 1 | " | " | ¾ | " | " | 39 | " | | 2262 | " |
| B. Adams | 1 | " | " | 1½ | " | " | 36¾ | " | | 2124 | " |
| N. Tapley | 1 | " | " | 1 | " | " | 24⅕ | " | | 1403⅗ | " |
| " | " | " | " | " | " | straw | 3700 | " | " | " | " |

*Plaster of Paris on my farm in Middleton, has not generally produced obvious effects. But there we have seen its benefit most decidedly on beans and onions.

†See letter of H. Poor, appended to this Report.

The experiments of Messrs. Adino Page and Nathan Tapley, both of Danvers, show in a strong light the difference in value of crops of fall and spring-sown grain. These fields were examined by a part of the Committee, before the rye was harvested. The soil of the different fields was very similar, naturally a light gravelly or sandy loam. It would be difficult to say which was best manured or cultivated, and it is decidedly the opinion of the Committee, that had Mr. Tapley sown fall instead of spring grain, he would have obtained as large a crop as Mr. Page, who obtained, by cradling too, thirty-nine bushels to the acre, while Mr. Tapley, who reaped his, obtained only 24 1-3.

The very extraordinary yield of Mr. Brown's acre of land, on Marblehead Neck, indicates that either the sea air or sea shore manures, kelp, &c., are peculiarly suited to this crop. In estimating the value of a crop of rye, the straw is an item of no small importance. Mr. Brown sold the produce in straw of his acre, in Boston, for twenty-eight dollars.

Thaer, the celebrated German writer on agriculture, goes into some curious calculations to deduce the produce in straw from that of the grain. He says, that the proportion of grain to straw varies

In rye, from 38 to 42 in 100. In wheat, from 48 to 52 in 100.
In barley " 62 " 64 " " In oats, " 60 " 62 " "

It will be seen on examining the statement of Mr. Brown, and calculating the results, that his crop gave grain 52 to straw 100, and Mr. Tapley's gave grain 51 to straw 100.

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## INDIAN CORN.

Adino Page's statement shows not so large a product, to be sure, as has been frequently presented by claimants in former years; but when we consider the nature of the soil, and the drought of the season, at the very time that corn crops are

most injured by the want of rain, we think his experiment quite as valuable as any that has preceded it. The land on which this crop of Indian corn was raised, is on the north western margin of a somewhat extensive plain which is a prairie in miniature, bounded on the north, west, and south west, by hills, composed of a stone formation which is a variety of Sienite, possessing some peculiar characteristics, not however such as are particularly interesting in an agricultural view, further than is necessary to explain the peculiar nature of the soil, and sub-soil of this region. The rock is composed of Felspar, Quartz and Hornblend, much the largest part of it being a greenish Felspar, which contains a large percentage of potash. This rock, wherever it has been for ages exposed to atmospheric influences, has become extensively disintegrated and crumbled into a coarse rough gravel, and forms the sub-soil of the land under consideration. This sub-soil is a complete filter, through which the water which falls in rain on this plain, and on the hill sides around it, percolates, is filtered, and becomes purified in a much higher degree than spring water generally found in other places. This plain, we have said, is a prairie in miniature. It was formerly the bottom of a lake. And this corn field was on the margin, where the alluvial deposite is shallow, and so constituted as to drain off all the water that falls upon it. On this naturally barren soil—on land which, if suffered again to become exhausted would not sell for thirty dollars an acre, by deep ploughing, liberal manuring, and clean culture, over eighty bushels of corn to the acre has been obtained. And this, we think, is more encouraging to farmers generally, than those experiments on the best soils in the county, where have been raised one hundred bushels to the acre. The tillage of this crop was entrusted chiefly to the paupers of the establishment, it being on the Danvers alms-house farm, and the corn was hilled more than the best management would justify. This was the only fault which those of the Committee who saw the crop on the field, noticed. No weeds were allowed to grow among this corn, which, therefore, received the entire monopoly of the manure.

## MIXED CROP.

The statement of P. P. Pillsbury, of Andover, of a Mixed Crop of corn and beans, although it did not come exactly within the list of premiums referred to this Committee, was deemed of sufficient importance to merit their attention, and worthy a gratuity from the Society. Mixed crops have not received that attention from farmers of this county which they probably deserve. The mixed crop of corn and potatoes, for which an unclaimed premium has been offered, certainly promises to reward well the experimenter. The potato rot, instead of discouraging the trial, seems to us to offer additional inducements to crop our lands in this manner. At the price which potatoes now command, should they not rot, the acre would with certainty prove much more productive of income than it would if planted with corn alone. And if they should rot, the cultivator would not lose his labour as when he cultivates potatoes, which rot alone; for the corn would not be injured, but most probably benefitted by the manure bequeathed it by its dying partner in occupancy.

By planting, as Washington did, the corn eight feet by two, and the potatoes in the same manner in alternate rows, it will be perceived that the same number of hills is obtained of each as would be of corn or potatoes alone, when planted four feet apart each way. That more manure would be required or profitably used for the double, than for the single crop, is doubtless true; and that the soil is composed of elements, some of which are consumed much less by the one vegetable than by the other, is also a well established fact in agricultural philosophy. Hence we infer, that a mixed crop can be obtained in one year from the acre of land, of greater value than a crop of either of the plants alone, but at the expense of greater exhaustion of fertility of course. Farmers have long been in the habit of raising mixed crops of some of the following vegetables: Indian corn, pumpkins, beans, turnips, &c., without so noting the gain or loss thereby, as to afford any important information to themselves or others, in regard to the utility of such management. It is certainly very desirable these experiments should be so managed as to establish the

true value of the practice. Mixed crops of the cereals, such as wheat and oats, wheat and rye, &c., have been much approved in some districts of New England, and may be well worthy of further experiments. But there are mixed crops too frequently seen every where around us, which all good amateur or practical farmers decidedly condemn. These are mixed crops of Indian corn, potatoes, or some of the above named vegetables, with Roman wormwood, and a variety of other weeds, which add nothing whatever to the profits of agricultural operations. Farmers of Essex county, how long will you tolerate such culture?

The Committee award the following premiums:

| | |
|---|---|
| To Benjamin Rogers, of Andover, for wheat | $6 00 |
| " Ephraim Brown, of Marblehead, for rye | 6 00 |
| " Adino Page, of Danvers, for Indian corn | 6 00 |
| " Paul P. Pillsbury, of Andover, for a mixed crop of corn and beans, they recommend a gratuity | 6 00 |

Per order of the Committee.

ANDREW NICHOLS, CHAIRMAN.

November 22d, 1851.

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BENJAMIN ROGERS'S STATEMENT.

I offer for premium a crop of Winter Wheat, called white flint, measuring forty-one and a half bushels from one bushel and three pecks of seed, sowed on one acre and $25\frac{4}{10}$ rods of land. This land has a northwesterly descent of twelve to twenty feet. The soil varies from a light sandy loam, to meadow mud; the lowest part being so wet, that I was obliged to dig a ditch the length of the field to drain the land.

Last year this piece of land produced about one ton of hay. Soon after it was mowed, it was ploughed with a large plough, at least eight inches deep, and five cords of manure spread and thoroughly harrowed—the manure used was such as is made in hogpens from meadow mud, loam and barn manure, the seed was sowed and covered with a harrow, and rolled on

the thirteenth of September ; on the first of May following, thirty bushels of leached ashes was spread, and in June, two bushels of plaster of Paris.

Andover, Oct. 18th, 1851.

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HENRY POOR'S STATEMENT.

I present for premium, samples of White Flint, and Blue Stem Winter Wheat.

Of the white flint, I measured an exact acre, which produced twenty-six bushels clear wheat.

Of the two varieties, it may be difficult to judge which has the greatest intrinsic value for flouring purposes, they both being of the same weight, sixty pounds to the bushel.

The "blue stem," derives its name from the blue shade of the straw, before and after it is ripe, while the other is of a golden color. The "patent office reports" from various sections of the country, report more favorably for "Soule's blue stem," than any other variety.

Renewing my anxious desire, (connected with several years of successful experiments,) I trust I shall be pardoned in bringing once more to your notice, this much neglected and all important branch of agriculture in New England. Indeed, it would be traitorous in me, or any one else, and selfish in the extreme, to withhold information so necessary to the public good. On this ground, you will excuse the intrusion of one, whose claims are insignificant in matters of general agriculture. I think it no dream of fancy to express, that the time is nigh at hand, when the New England farmer will raise his own bread, and to spare—and here, I would ask, what obstacles are in his way ? Should he lack FAITH, and THE LITTLE HE MIGHT HAVE, NEED CONFIRMATION, let him visit this neighborhood, or extend his inquiries into Maine. We all know, good soil and manure are indispensable in producing ANY CROP. How little value in comparison with wheat, are all the small grains which every farmer cultivates. No particular ART or

SKILL is required in cultivating wheat. Where general information is had on the subject, we need not fear results.

We may say, we are now in the green season of "the blade," (at length,) "then the ear," (finally,) "the full corn in the ear"—such we trust, is our progressive state.

Andover, Sept. 23d, 1851.

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EPHRAIM BROWN'S STATEMENT.

I herewith submit a statement of a crop of Rye, raised on one acre of land, on my farm, on Marblehead Neck. The land had been several years in grass, which became very much rooted out by the TWITCH-GRASS, and in the spring of 1849, I broke it up, and manured it with a very liberal dressing of rotten kelp, spread on the top of the furrows and harrowed in, then planted it with marrow squashes; after gathering the squashes in the fall, I cross ploughed it again, in order to expose the roots of the twitch-grass to the frost, which in a great measure subdued it. In the spring of 1850, I ploughed it once, harrowed it down, and spread on AGAIN a very liberal dressing of rotten kelp, which I ploughed in, and then planted it with potatoes, which I dug in September, and the last week in that month I ploughed it and sowed it with one and a half bushels of winter rye. Not thinking of entering this crop for a premium, I was not particular to ascertain the exact quantity of manure used, but as I said above, I manured liberally, probably six to eight loads to the acre. The rye I had reaped the last week in July, and housed the first week in August, and after it had been in the barn about a week, I had it thrashed out, and Mr. John Hatch, who was foreman, at that time, on my farm, cleaned it up, and measured it from the mill, and it measured forty-eight bushels, and one peck, weighing fifty-eight pounds to the bushels. The straw weighed 5295 lbs. which I sold as follows: The first load, 2200 lbs. sold for $10 per ton, the second load, 3095 lbs. sold for $11 per ton, total $28 02.

The labor employed on this land, has been nothing more than is usually employed in cultivating land in this way.

Marblehead, Oct. 25th, 1851.

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DAVID COGSWELL'S STATEMENT.

I send you a sample of Rye, raised by me, on one acre of land, from one bushel of sowing. The land is near the depot in Ipswich, and is a side hill, the highest part is gravel mixed with loam, and the residue is good soil. It was broke up in the spring of 1849, and planted with potatoes, with two and a half cords of barn manure, and one barrel Guano. In 1850, it was planted with potatoes, five cords of manure ploughed in; in September, the same year, was sowed down with one bushel of rye and grass seed, without manure. It was reaped in August 1851, and all cleaned like the sample, and measured thirty-eight and a half bushels, weighing sixty and one half pounds to the bushel; the straw has not been weighed, I should judge there was one and a half tons.

Ipswich, Sept. 24th, 1851.

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ADINO PAGE'S STATEMENT.

I present for your examination, the product of a field of Winter Rye, on the town farm in Danvers. The soil on which it grew, is about an average quality, with that of the farm, known to be shallow, light and gravelly.

Where the rye grew it was broken up in 1849, and planted with corn. In 1850, it was well manured, and planted with potatoes; yielded a fair crop, most of which rotted, as did the others grown on the farm. It was ploughed the latter part of September, deep, with two pair of cattle, and the rye was sown on the fourth of October. It came up and looked well through the winter. A little over one and a half bushels of seed was sown on the piece, containing two acres and nine

poles, of rye raised on the farm. The field yielded eighty bushels, weighing fifty-eight pounds to the bushel, of as handsome rye as I ever saw. The straw was upright and fair.

Danvers, Sept. 1st, 1851.

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RICHARD ADAMS'S STATEMENT.

I offer for premium a crop of Winter Rye, raised on one acre and eight rods of land, being thirty-eight bushels and nineteen quarts and a half, or at the rate of thirty-six bushels, and $24\frac{4}{7}$ quarts to the acre.

The soil is a dark loam, which was manured in the spring of 1850, with eight cords of barn manure, and a crop of potatoes raised thereon. No additional manure was used. On the first week in October, the land was sowed with a bushel and a half of winter rye, and in the latter part of July 1851, the crop was harvested.

It should be mentioned, that there are five apple trees standing on the ground, each of which, will, on an average, shade a circle of one rod in diameter, and that at the least, two bushels of grain were on one end of the piece destroyed by my hens.

Newbury, Sept. 24th, 1851.

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NATHAN TAPLEY'S STATEMENT.

I herewith send you a sample of Rye, grown on a piece of ground viewed by you before harvested. The product of the same was thirty-two and one half bushels. The measurement of the land is one acre and fifty-five poles. Onions had been cultivated on the land for a number of years, and believing that a change of crop would be beneficial, in the spring, as soon as the land was sufficiently dry to work, I ploughed it, and sowed five pecks of seed on the furrow and harrowed it in. I put a sprinkling of compost manure on about one half of the

piece where I thought it most needed. I am aware that the number of bushels per acre, unless there is some distinction between spring and winter rye, does not come up to the requirements for a premium, but the quality I think very fine. I sold it at ninety cents per bushel, except three or four bushels reserved for family use. I have sold thirty-two hundred weight of straw, it being very clear, and good for bunching onions, at fifty cents per hundred at the barn, and have about five hundred weight now on hand, making thirty-seven hundred pounds in all, amounting to eighteen dollars and fifty cents for the straw, and twenty-nine dollars and twenty-five cents for the grain.

Danvers, Oct. 1st, 1851.

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ADINO PAGE'S STATEMENT.

I present for your examination, one and a half acres of Corn. Where the corn grew, grass was mown in 1850, less than half a ton of poor hay to the acre. After the mowing, I put on eight cords of compost manure, and ploughed it in. In the spring, I cross-ploughed the lot about two inches deeper, than in the fall; I furrowed it only one way, four feet apart, and planted the hills three feet apart, applying about two cords of fine manure in the hills. At the time of hoeing, it was considerably eaten by worms; I thinned it out to four stocks to the hill. It grew luxuriantly until the drought in the last of July and first of August. It then rolled so much, that I feared the crop would be small. It afterwards revived, and when gathered it yielded two hundred and twenty-three baskets of fair sound corn—and twenty-four baskets of ordinary quality. I estimate the produce to have been one hundred and twenty-three bushels of corn; a sample of which on the ear, I present for your inspection.

Town Farm, Danvers, Oct. 6th, 1851.

PAUL P. PILLSBURY'S STATEMENT.

I beg leave to submit the following facts, relating to the cultivation of a mixed crop of corn and beans, on my farm in Andover. The crop which I offer for premium, was the produce of one acre. The land was broken up in the fall of 1849, and planted in 1850, with corn. Twenty common cart loads of manure spread on to the acre. Crop about fifty bushels per acre.

In the spring of 1851, there were fifteen cart loads of barn manure spread to the acre and ploughed in; then the land was harrowed, then furrowed, and manured with eight cart loads of compost manure to the acre. On the twentieth of May, I planted with the Golden Sioux corn, with from three to four kernels to the hill, and the same number of beans. Hills three and a half feet apart each way. Hoed twice. The stalks cut first of September. Corn harvested first week in October, and the crop was one hundred and forty-one and a half baskets, full of ears of corn, weighing forty-one pounds to the basket, and one basket full, of equal weight and measure, kept until the first of November, gave eighteen quarts of shelled corn. The corn when harvested was sound and dry, a sample of which was presented at the Cattle Show, at Salem, in September. There were six bushels of white beans on the acre.

The following is the amount of labor done this present season upon this crop. Two men and one yoke of oxen, one day and a half hauling and dropping manure, one man and one yoke of oxen, one day ploughing and furrowing, one man and a boy one day planting, hoeing twice, five days labor, cutting and binding stalks two days labor, harvesting corn and beans, seven days labor.

The soil is a brown loam. Land is valued at fifty dollars per acre.

Andover, Nov. 3d, 1851.

HENRY POOR'S LETTER.

BOSTON, Nov. 20th, 1851.

DOCT. NICHOLS.

Dear Sir—I promised to collect information, and report to you, in relation to the Winter Wheat Crop.

I learn from six or eight farmers, at Andover and Methuen, that they have secured 18, 22, 25, 28, and 35 bushels to the acre. These facts will justify a strong report from you, and, as one of the Committee, I hope you will make it an object to draw the farmer's attention to it, as the MOST VALUABLE—most important crop of the cereals.

I am fully satisfied, that even the small farmer, has GOOD LAND enough to raise wheat, to bread his family, and to spare. The least we can do, is, to give it our sanction, and hearty encouragement. ERRORS have crept into the public mind, in regard to the EXHAUSTION OF THE SOIL of its peculiar properties to raise wheat. This notion is easily dispelled by applying manures or ashes, to produce the crop as we would do for any other crop. Yours truly. HENRY POOR.

Andover, Nov. 20th, 1851.

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## ON ROOT CROPS.

The Committee on Root Crops, report the following entries for premium, the present year, viz:—

1st. Lyman Mason, of Beverly, for his crop of cabbages, on two and one half acres of ground, the product of which has been sold in the market for the sum of $1,134 37. Also, his crop of onions on one and seven-eighths of an acre of ground, yielding twelve hundred and fifty bushels, or six hundred and fifty bushels to the acre, which have been sold in the Boston market for the sum of $543 62. He also presented to the notice of the Committee, his crop of carrots, on forty-two rods of ground, which has produced six and one half tons. The Society having limited the quantity of land

to half an acre, to entitle it to a premium, the Committee could do nothing more for the carrots than notice their extraordinary yield.

2d. Orlando Southwick, of Danvers, for his crop of onions on one hundred and four rods of ground, yielding three hundred and ninety bushels, or at the rate of six hundred bushels to the acre.

3d. Josiah Titcomb, of Byfield, for his crop of onions, on one acre of ground, yielding seven hundred and three bushels.

4th. Richard P. Waters, of Beverly, for his crop of carrots on three quarters of an acre of ground, yielding at the rate of nineteen tons to the acre.

Statements of the above named crops are herewith submitted, giving a more detailed account of the mode of cultivation, kind of soil, quantity of manure used, and other particulars, to which attention is invited.

The Committee have awarded the premiums as follows :—

To Lyman Mason, of Beverly, for his crop of cabbages $6 00
" Josiah Titcomb, of Byfield, for his crop of onions 6 00
" Richard P. Waters, of Beverly, for his crop of carrots 6 00

5th. An entry was made by John Bradstreet, of Danvers, for his crop of potatoes. The Committee regret that there was no premium offered by the Society, the present year, for potatoes, as this crop is certainly worthy of one. It seemed to the Committee that Mr. B.'s success in raising the potato is owing in a great measure to his thorough mode of cultivation, and in the selection of seed. He plants in the old fashioned way, putting a shovel full of barn-yard manure in the hill—thinks some farmers mistake in making the hills too near together, and putting too much seed in a hill. He plants mostly his seedlings, called the Danvers Reds, thinks they do better than any other kind, has tried others the present season. We saw a part of his crop while they were being dug; they were a fine specimen, of large sound potatoes, averaging a bushel to sixteen hills.

Knowing Mr. Bradstreet to be a man of much experience and observation in farming, we requested him to give us a statement of his crop, and as particular an account of his mode

of cultivation as practicable, which statement is herewith submitted, and we recommend its publication in the transactions of the Society.

For the Committee, LEWIS ALLEN.

Danvers, Nov. 25th, 1851.

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LYMAN MASON'S STATEMENT.

The following is an accurate account of root crops, raised the past season upon the farm occupied by me, at Beverly Farms.

Upon forty-two rods of loamy soil, manured at the rate of six cords to the acre, one half leached ashes, and one half barn manure, I have gathered two hundred and sixty bushels of carrots, weighing six tons and a half, averaging twenty-five tons, and one hundred and seventy-five pounds to an acre.

Upon one acre and seven-eighths of loamy soil, manured at the same rate as above, I have gathered twelve hundred and eighteen bushels of onions, of full growth and prime quality. All sold in Boston market, at one dollar and six cents to fill a barrel; making a total of five hundred and forty-three dollars, and sixty-two cents, averaging six hundred and fifty bushels, and two hundred and ninety dollars to the acre.

Upon two acres and one half of loamy soil, manured the same as above, I have gathered eighteen thousand and one hundred and fifty heads of cabbages, which have brought seventy-five cents per dozen, amounting to eleven hundred and thirty-four dollars and thirty-seven and half cents, averaging seven thousand two hundred and sixty heads, and four hundred and fifty-three dollars and seventy-one cents to the acre.

Beverly Farms, Nov. 15, 1851.

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JOSIAH TITCOMB'S STATEMENT.

Below I send you a statement of my crop of Onions this year:—

I employed Albert S. Adams to measure off one acre of my

ground. I then employed Adam Rhodes and my son, John Titcomb, to measure the onions on that acre, and they made seven hundred and three bushels.

My land is a strong loam; a part of the land has been sowed with onions four years, and a part of it only two years. I plough very shallow in the spring, and put on the ground about four cords of manure to the acre. I sow a part of Danvers seed, and a part of the Old Town seed; get the largest crop from the Old Town seed, the earliest from the Danvers seed.

Byfield, Nov. 14th, 1851.

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ORLANDO SOUTHWICK'S STATEMENT.

I make application for premium on a crop of Onions, from land measuring one hundred and four rods, yielding three hundred and ninety bushels of onions, of large size, and excellent quality. The land is elevated, with generally a southern exposure, and upon about two thirds of it a crop of onions had been raised last year; on the remainder this was the first crop of this vegetable. The cost of producing this crop was as follows:—

| | |
|---|---|
| Compost manure, (3-4 stable manure mixed with 1-4 night soil,) 2 1-2 cords at $5 00 - - | $12 50 |
| 200 bushels leached ashes at 6 1-2 cents - | 13 00 |
| 2 pounds of seed valued at - - - | 3 00 |
| Labor valued at - - - - | 30 00 |
| | $58 05 |
| Value of crop, as above,—390 bushels, at 40 cents,— | $156 00 |
| From which deduct cost of production - | 58 50 |
| Leaving a net profit of - - - | $97 50 |

Danvers, Nov. 13th, 1851.

RICHARD P. WATERS'S STATEMENT.

I offer for premium a crop of carrots, raised on one hundred and twenty square poles of land. By careful measurement, the product was four hundred and forty-two baskets—a basket weight sixty-four lbs., and amounting to more than fourteen tons, and making about nineteen tons to the acre. The soil was a mixed dark and yellow loam, had been fenced off from the pasture the year before and planted to squashes and corn fodder, and received but a light dressing of manure.

The present season we manured it with three cords of barn yard manure, the scrapings of the yard after we had finished our planting, and ploughed it in, the latter part of May. It was sowed on the second of June, the rows eighteen inches apart, with one pound of orange and one quarter pound of horn carrot seed. I should think one sixth of the orange seed failed to come up, and on these vacant spots we set out cabbages. The piece was hoed once and weeded twice by hand. The carrots were harvested on the thirteenth and seventeenth of November, by running a plough parallel with the rows, within four to six inches of the carrots, and then we turned them out with the spade.

EXPENSES OF CULTIVATION.

| | |
|---|---|
| Interest on land - - - - | $5 00 |
| Three cords of manure - - - - | 18 00 |
| Spreading manure, ploughing, harrowing, raking and sowing - - - - - | 6 00 |
| Seed - - - - - | 1 25 |
| Hoeing, weeding, and harvesting - - - | 26 50 |
| | $56 75. |

RICHARD P. WATERS.

Cherry Hill Farm, Beverly, Nov. 1851.

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JOHN BRADSTREET'S STATEMENT.

As I have been requested to give a statement of my Potato

crop, and my mode of planting, I will offer the same, with a few remarks founded on my own experience and observation. I planted three bushels of Chenangoes about the first of May, on good land, had thirty-one bushels, very few rotten; they did better than I have had that kind do for many years.

I planted three bushels of two kinds of seedlings, that I have. They were planted in three fields; had fifty-four bushels; found a few rotten in low land. I consider they did well for these kinds. I also planted twenty-eight bushels of my red seedlings on about four and one half acres of land; had eight hundred and eighty bushels, yielding a bushel to every sixteen hills, and a fraction over thirty-one bushels from one bushel of seed. They were planted in four different fields, varying from the fourth of May, to the twenty-eighth of May, one field was the highest land I cultivate, and one small piece was as low as any. The seed and crop were measured. I give the land according to my judgement. They are old fields, that I have cultivated many times. I planted one piece of new sward land, which I consider rather preferable for potatoes, less than one acre, with six and one half bushels of seed, and had two hundred and eight bushels, two hundred of which were of merchantable size, and all were sound. I never raised any potatoes, that would yield so well, under every circumstance, as these. Planted early or late, on high land or low, good or shallow, whether the season be hot and dry, or wet and cold, they have always done well, except under trees.

I plough all my land in the spring, as I think land cannot be too light for this crop. I harrow all my ground with a heavy iron tooth harrow, only a day or two before I furrow; I furrow both ways, at a distance that a plough can pass each way, and that it does pass. I think many people err by having too many hills, as well as too much seed in the hill. I commonly plough about six inches deep, low land less; I put all my manure in the hill, one shovel full to the hill. I prefer at least one half such as has been made in my barn yard during summer. I cart it out in the fall in heaps, according to the field where it is to be used, and level the loads to make the heap flat. I like to cart out my winter manure as early in the

spring as I can, and tip it on top of the other. I never disturb it until I fill it to put in the hill, minding to mix it well then. To my certain knowledge, there has not been one heap of manure forked over on my farm for forty years, and I believe my crops are as good as others in my vicinity. I know some will say that this manure has lost all its strength, and is about worthless; but strange to tell, it makes my potatoes grow well. I know the motto now is, to cultivate but little land and manure high; but I am confident that is not the best way for potatoes; they do not need so much manure, nor that of the strongest kind. As for medicines they need none, and all that is applied to them I consider as quackery in the extreme.

I will here make a few remarks concerning the rot in potatoes. As to the great cause, or why it so differs from that of former years, I believe no man can solve; but I do believe some preventives may be practised by most farmers, with but little inconvenience and no expense. I always did think, and do now, that the weather has much to do about it; and I should think the result of the two last seasons was sufficient to convince any man of this. Much depends on the seed, those being best that are hardy and vigorous by nature. With my mode of planting, I have succeeded with old degenerated kinds, to that degree that the price obtained has more than remunerated my losses. But with my seedlings, called the Danvers Reds, my success has been complete. Not a little, in my opinion, depends on the manure. I think mud a bad ingredient, particularly when worked over by hogs, or any other strong manure. Something too depends on the manner of cultivation, after they are planted, and much depends on the land. That which is mellow and porous, is by far better than that which has a hard pan.

These opinions are formed on my own experience and observation. I could explain at large on each, if I had time and inclination; but those that know me well, know that I am not much given to making converts to any of my notions, therefore they cannot expect I shall be very anxious in making converts to my way of raising potatoes.

As for insects, I have no idea they have any more connection with the rot in potatoes, than the birds that fly over them.

North Danvers, Nov. 22d, 1851.

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## ON FARMS.

The Committee on Farms, in making their report, regret that they cannot, from personal observation, speak more generally of the state of farming within the county. We believe there are many farms in our limits, as yet unknown, by report of your Committees to the Society, well worthy of your commendation; from the inspection and report of which, in connection with the statement of the management of their owners, much valuable information would be derived, and the cause of agriculture advanced. At present, with us, progress in the cultivation of the soil depends very much upon the dissemination of the practical experiments of our best agriculturists; and until, by the introduction of schools designed to illustrate the principles of science, as they are connected with the cultivation of the earth, we cannot reasonably expect that general improvement in agriculture, we desire, and believe attainable. Some few of the many farmers, will, by the application of skill and science in their method of farming, distinguish themselves by their increased and improved products: and to these we must look as teachers, and to their statements, as text books in farming, until the principles of agriculture are taught to our youth, as a part of their preparation for the active duties of life.

We have our schools for instruction in law, physic and divinity, more or less patronized by the state; and why should the calling of the great body of the community, be without its public school? Is not this want, in a degree, chargeable to our own remissness in urging upon the Legislature of the Commonwealth, its duty in this respect.

The only farm offered for inspection, and premium, this year,

is that of William F. Porter, of Bradford; pleasantly situated on the Merrimac river, and intersected by the county road leading from Haverhill to Newburyport and Salem. This farm is well known in the northern part of the county, from the frequency of change in owners; as well as from its general character of fertility. Under most of its late owners, we have no doubt a spirit of improvement has been manifested, evidences of some of which are now visible; but so far as is known to your Committee, the progress of improvement had not entitled it to the favorable notice of the Society. Since Mr. Porter's occupancy, great improvements have been made in the arrangements of the farm buildings, in the increased convenience in the gathering of the crops, in the feeding out of the same, the arrangement for the housing of the stock, and the securing of their droppings.

The crops of the farm the present year are good, and the inspection of them, bears testimony of the skill and attentiveness of the cultivator. The increase over former years is made evident by the statement of Mr. Porter. The Committee think it unnecessary to remark upon the crops in detail, and will allude only to some few particulars, and refer the Society to the full and particular statement of Mr. Porter, for a knowledge of his manner of farming.

The crop of broom corn, attracted the notice of the Committee, as being a successful experiment, in a cultivation not common in this county. From the appearance of the crop and the statement of its yield of seed, and broom brush, we believe it may be recommended as a desirable and paying crop, on the warm lands in the county. We do this more confidently from the double product, the seed and brush, of the plant; believing that the successful return of either will compensate the cultivator for his labor. Mr. Porter's opinion of the comparative exhaustion of this crop, and Indian corn, upon the soil, we are not fully prepared to endorse, as, in the case of broom corn, the bulk of the crop is returned to the soil, while in Indian corn, it is mostly removed.

The remarks of Mr. Porter, on the comparative advantage of stable and compost manure, as a top dressing, we hope will

elicit the observation and experiment of our agriculturists. Composting has of late been a prominent theme of our agricultural writers, and if the application of the basis of compost is equally as effective as the compost, much labor may be saved.

The young orchard named in the statement, was particularly noticed, and commended by the Committee. The trees were all thrifty, and of healthy appearance, and gave strong symptoms that a part of the increasing profits of the farm, spoken of in the statement, may reasonably be expected from this source. The trees in grass land, under the treatment of Mr. Porter, appeared fully as vigorous as those on cultivated grounds.

We cannot pass, without notice, the home pasture, on which was kept during the season, stock equal to one cow to about two and one quarter acres of land; and from the appearance of the pasture, the condition of the cows, and the amount of milk taken, the feed was not stinted. This is a result in pasturing, which is not usually seen, and forcibly impresses us with the importance of devoting more attention to pasture grounds. This subject has already attracted the notice of the Society, and we trust will receive the attention its importance demands.

On the profits of farming, there exists a diversity of opinions; and the belief that agriculture is not one of the most direct roads to wealth, probably induces many of the sons of farmers to other pursuits of life. If the statements of some of our best farmers, are entitled to full belief, no occupation offers more certainty, and few, larger hopes of success, than agriculture. And that these statements are reliable, most of us have indications from the profits of some small patches of our land, that by design or accident may have been devoted to a suitable crop, and cultivated with unusual care. Extended cultivation is probably the greatest obstacle to improvement; as from our attempt to grasp the whole range of agriculture, and in some cases, perhaps, horticulture, the mind is too much distracted to give sufficient thought, and the labor too much diversified and pressing to be devoted in as full a manner as it

should be, to any particular branch. With education adapted to agricultural pursuits, and with farms not too large for the mental and physical powers, we do not believe there is any occupation, so desirable for its certainty, healthfulness, and success, to the majority of our young men, as agriculture.

For the Committee, JOSIAH LITTLE.

Dec. 1, 1851.

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WILLIAM F. PORTER'S STATEMENT.

The farm offered for the Society's premium I purchased Oct. 9th, 1849, and moved on to the same March 11th, 1850. It is situated in Bradford, and formerly was well known as the Elwell, but more recently, the Silsbee farm. The county road from Haverhill to Newburyport and Salem, passes through the farm. It contains one hundred and forty-seven acres, divided as follows: forty-three and one half acres of pasture, lying south west of the road; forty-three and one half acres of mowing and tillage, north easterly of the road, and upon which the principal part of the buildings stand; also, an island of sixty acres, in Merrimac river, the distance across the water from the mowing and tillage land, being twenty rods. In May last I purchased seventeen acres of pasture, adjoining the first named lot, also. sixty-five acres of pasture land situated in the east parish of Haverhill, making in all two hundred and twenty-nine acres.

The first named pasture, which is a hill very elevated above the surrounding land, consists of a black gravelly loam, with a sub-soil of gravel intermixed with clay, and at a former period a large portion of it was cultivated. The mowing and tillage land is somewhat uneven, and about twenty acres consist of a black moist loam, from eight to twenty inches deep, with more or less slate stones intermixed, and resting upon a hard pan of gravel and clay. About half of the remainder is too low for cultivation, and was cleared of bushes and alders fifteen years since, by Mr. Silsbee. This soil is from one to

three feet deep, inclining to a peaty nature, and having a similar sub-soil to the above. The soil of the rest is a sandy loam, with a sub-soil not very dissimilar, and borders upon the river. The soil of the island is a sandy loam, and in digging a well, I find the sub-soil very similar for twenty feet. Two thirds of the surface of the island is elevated about twenty feet above the bed of the river, and more than half the time for the last forty years, has been improved for raising corn, rye, and oats. The other third is ten or twelve feet lower, and about seventeen acres is now covered with a variety of wood, consisting of yellow birch, grey oak, elm, bass, maple and walnut. The wood upon the remaining seven acres was cut off in 1846, and most of this lot, with the preceding, is usually overflowed with water, in the spring freshets.

The soil of the pasture in Haverhill, is a gravelly loam, of a reddish cast, and the sub-soil I have not examined. It is said to be the highest elevation in the county, with one or two exceptions.

The buildings, at the time of my purchase, consisted of a large two story dwelling house, with an L attached, finished to accommodate the help required to carry on the farm, an old barn one hundred feet by forty-five, twelve feet post, and very inconvenient, a horse-barn about forty by twenty feet, with carriage house in the same, and cellar under a part; granary two stories, twenty by thirty feet, and a piggery; also, a barn on the island, thirty-two by sixty feet, and twenty foot post. Last year I took down the old barn, and sold the building used for a granery, both of which were ill adapted for the purposes intended, and built a new barn, seventy-five by forty feet, and twenty-six foot post. This barn is situated on the side hill, about one hundred feet north east of the dwelling house, and has two drive ways through the centre lengthwise, twelve feet wide. The upper drive way is thirteen feet above the lower, and is conveniently entered by means of a platform, or bridge, twenty feet in length, and supported at the lower end by a breast wall, ten feet high, the side hill being excavated to a level with the lower floor to afford a convenient entrance to the barn yard, and lower floor, which is used for feeding the

stock in the leanto, it being on a level with said floor, and for unloading muck or loam through scuttles into the cellar beneath. The hay and fodder are all unloaded from the upper drive way or floor, into bags on either side, both of which are seventy-five feet long by fourteen wide. One is twenty-six feet deep and the other eighteen; the LEANTO being under the last, fourteen feet wide, and running the entire length of the barn, is fitted to tie up sixteen cows, and six oxen, and is lighted by five glass windows, having a shelf eighteen inches wide, and three feet from the floor to protect the windows, and for setting pails while milking. The manure from the LEANTO is deposited in the cellar, which is under the whole barn, nine feet deep, and open to the south fifty feet, and the cellar wall is from one and a half to three feet thick, mostly laid in mortar.

The frame of the barn is of chestnut timber entire, except the rafters, which are spruce. The body of the barn, except eight feet of the basement, is covered with pine boards twelve inches wide, placed four inches apart, and the intervening space covered with boards eight inches wide, and one and a half inches thick, thus making a tight finish externally, and upon the inside a space for the free circulation of air, which I deem of great importance for the better preservation of the hay. The basement story is covered with matched boards, grooved and painted upon the surface with the Ohio fire-proof cement, so called, and sanded to imitate freestone. The remainder above is painted with lead and oil. The roof is slated, and there is a cupola in the centre twelve feet square, and sixteen high, with a window on each side, to open when necessary to ventilate the barn.

I also erected last year a building fifty by fifteen feet, for tool house, work shop, &c., adjoining the south west corner of the barn, with a basement story eight feet high, the bottom of which is on a level with the lower story of the barn, having a heavy stone wall on one side and one end, the other side being open to the barn yard, for the access of the cattle to the watering trough, which is supplied by a lead pipe, seventy-three feet to a fountain, and made to receive the water of two under-drains which I have laid for the purpose of draining the

garden and other land about the buildings. The surplus water from the above trough, is conducted through another lead pipe under ground to a second trough in the barn cellar, and the waste water from this trough passes off in an under-drain to the field below the barn.

I have also erected this season another building, fifty by sixteen feet, and sixteen feet post, adjoining the north east corner of the barn, fitted with seven double stalls, each six and a half feet wide, for tieing with chains fourteen cows, and a rack to receive the hay from the loft above, and a light box under the rack for grain or cut feed, with a basement beneath built partly of stone and wood, the bottom being on a level with the barn yard and barn cellar, and is used for receiving the manure from the cows, except a passage way for carting the manure from the barn yard and cellar. This building and the preceding, are boarded and painted in a similar style to the barn, and with slated roofs. These two buildings with the barn, enclose three sides of the yard, leaving it open to the south east only, thus making a yard with the cellar, about ninety feet square, well protected from the cold winds and storms.

I have likewise built the present season, a piazza on the back side of my large dwelling house, and a wood house attached, thirty by eight feet; also, a small house on the island, twenty-five by eighteen feet, one and a half stories high, and have dug and bricked a well twenty-five feet deep; repaired and fitted the island barn for tieing up twenty head of cattle, and enclosed a suitable yard for the same.

I have built and painted the present season, seventy-eight rods of picked fence, the materials being wholly chestnut; and ninety-four rods of fence, with all chestnut posts, and four rails high; about two thirds of the rails are spruce, and one third chestnut, six inches wide, and one and one quarter thick, and well nailed. The posts were all set three or more feet deep. Rocks in this immediate vicinity being scarce, created the necessity of erecting so much fence of wood.

I have laid two hundred and ninety feet of lead pipe to carry the water for the use of the cattle, into a brick trough

laid in cement, and situated in a basement room or cellar, which I have built of stone and brick, under the north east end of the L part of the house, twenty feet square. In this room I have a sink and copper boiler, set for scalding cans and milk vessels, into both of which the water is drawn by a faucet. Water is kept continually running into the brick trough at one end and out of the other, and the cans when filled with milk, are set into this trough of water, to preserve an equal temperature, and this keeps the milk sweet a longer time than any other way with which I am acquainted.

The water which supplies the milk cellar is taken from a well dug in the pasture opposite my house, and from which there is about ten feet fall. I have laid seventy-four rods of under-drains with stone, for the purpose of conducting off the surplus water from a portion of my orchard, garden, yards and troughs afore mentioned.

When I purchased the farm, Oct. 9, 1849, I bought all the hay in the barns, except two thousand fifty pounds. It was estimated by measure, allowing five hundred and twenty-five cubic feet for a ton, amounting to nearly 33 tons. The men employed on the farm were of the opinion that not more than six tons had been consumed on the farm of that year's produce, so that the amount of hay cut did not exceed forty tons. Four oxen and one horse were put on the farm Feb 1, 1850, and twelve cows and another horse March 11, and this stock consumed all the hay, except four tons, before July 1, the oxen and horse being kept up to hay all the time.

I have bought the manure made at the Eagle House stable, in Haverhill, for the two years past, and paid two hundred and twenty dollars per year, and the quantity has averaged about seventy-five cords a year. Twenty-five cords of this manure I spread upon the mowing land in the spring of 1850, and I believe it increased the quantity of hay that season more than one third. I planted about eleven acres, viz: six to Indian corn, three to broom corn, one to potatoes, one half an acre of sowed corn for fodder, and one half an acre to carrots and other vegetables; the whole of which was upon land sowed to oats the year previous, without grass seed. The

manure for the carrots, potatoes, and about two acres of the corn, was ploughed in at the rate of five cords to the acre, in its green state. The broom corn, and the remainder of the Indian corn, was planted on the island, and manured with compost in the hill, and at the rate of ten loads per acre, thirty-five bushels to the load. A half a gill of wood ashes and plaster was applied to each hill at the time of planting. I cultivated and hoed three times in the usual manner.

I sowed eight acres of spring rye on the island, on land planted to corn the year previous, with little or no manure, and on which I spread one hundred bushels of leached ashes per acre, and sowed ten pounds of southern clover per acre. These ashes cost six cents per bushel at Haverhill, one mile distant, and were boated to the island for one and a quarter cents per bushel. I sowed an acre to barley, and another to rye, on the home lot, having previously ploughed in about four cords of green manure per acre, and seeded down with one peck herds grass, one bushel northern red-top, and three pounds southern clover to the acre. Product of corn was two hundred and forty bushels by estimation, rye on the island sixty-four bushels, or eight bushels per acre by measure; rye on home lot twenty and one half bushels, barley twenty-two bushels, potatoes yielded well, but more than one half rotted, and carrots one hundred and fifty-six bushels on one quarter of an acre. Of fruit I had about forty barrels of winter apples, mostly baldwins, and over three hundred bushels of peaches. Kept in addition to the team, thirteen cows, and during the season made two thousand eight hundred and twenty pounds, of new milk cheese, and butter sufficient for the family's use.

The building of my barn, and other essential improvements, occupied so much of my time the first year, that I could not give that attention to the management of the farm, or keep so accurate an account of the amount of sales and the profits and expenses, as I have done for this year. But I believe, and hesitate not to say, that the amount of sales were ample to pay all the labor for carrying on the farm and maintaining the families, including the taxes, and the manure and ashes which have been bought. In August 1850, I turned over with the

plough five acres of sward land on my home lot, and applied forty cart loads of compost to the acre, made by mixing green manure with an equal part of good loam, meaning always by cart load, about 35 bushels. The land was thoroughly harrowed, and I sowed one peck of herds grass, and one bushel of northern red top per acre, and brushed and rolled the same. I think the product this year was full three tons per acre. The first week in Oct. 1850, I took off a crop of corn from an acre and a half of land adjoining the river, and ploughed in six cords of horse manure, sowed one and a half bushels of rye and sowed the same with grass seed. In September preceding I ploughed sixteen acres of land on the island, turned under all the grass that grew on the land, during the season, and which would have made about eight or ten hundred of hay to the acre. Two acres of this land was in the low part before refered to, and had never been ploughed. I sowed one acre of this low land with grass seed only, and the other fifteen acres with rye only, giving it no further dressing.

On the first day of April last, I commenced keeping a daily account of my sales, expenditures and labor performed on the farm, also the amount of farm produce of every description. On the 24th of April, I sowed one bushel of the Black Sea spring wheat, on two thirds of an acre of land, on the home lot, where potatoes grew the year previous, and seeded the same with red top and herds grass. On the same and the following day, I sowed twenty-four bushels of oats on eight acres of land on the island, and two bushels of barley on about three quarters of an acre, and seeded the same with ten pounds of southern clover to the acre. This land was in corn, and broom corn the year previous. From the 13th to the 16th of May, I planted three and a half acres of corn, and one and a half acre of potatoes on the home lot. One acre had been planted with corn and potatoes for two years previous, and the rest was in grass. I ploughed in twenty-five cart loads per acre of green manure from the barn cellar—ploughing ten inches deep—and put in the hills, six cart loads of manure to the acre, the ground being furrowed three and a half feet apart

each way, and planted with eight-rowed yellow corn, from Northfield, Mass,

From the 16th to the 28th of May, I ploughed and planted five and one half acres of Indian corn, and five and one half acres of broom corn on the island; one half the above eleven acres was a part of the fifteen acres sown to winter rye, in September previous, and the other half had the grass remaining on it which grew the year previous. The rye when ploughed in had just commenced heading out, and, to facilitate the covering, a brush harrow was drawn over the rye before ploughing. It was furrowed one way only, three feet apart, and across where both rye and grass, were ploughed in. It was manured in the hill, with ten cart loads of compost per acre, the hills in the rows being two and a half feet apart, as near as we could judge. Three varieties of corn were planted, viz: three and a half acres with the twelve and sixteen-rowed Canada corn, one acre with the aforenamed Pomeroy corn, and one acre with a white corn, called in Plymouth county, the Whitman corn. On that portion of the land where rye was ploughed under, the corn was not as good, and the broom corn not more than two thirds as good as on the other part. To all the Indian corn, and broom corn, I applied a small handful of unleached ashes upon each hill, immediately after planting, using ninety bushels on fourteen and a half acres. My Indian corn, broom corn, and potatoes, were all cultivated and hoed three times.

On the 28th of April, I sowed eighty-eight square rods to onions, forty-two rods on land where carrots were raised last year, and forty-six rods on land which was the site of the old barn and yard, and had been raised or filled up with loam, and soil of various qualities, from one to four feet. Both lots were manured with stable manure at the rate of eight cords per acre. I also raised one and a half acres of corn fodder. In August last I turned over with the plough two acres of sward land on my home lot, and spread forty loads of compost per acre; sowed one peck of herds grass, and one bushel of northern red top per acre; harrowed and rolled in same manner as the lot in 1850. In September following, I sowed ten

acres of winter rye, and two thirds of an acre of winter wheat; five acres of the rye, and the wheat on a clover lay, and the remainder on sward land, and on land where my corn fodder was raised this season; the last five acres were manured, at the rate of fifteen loads of compost per acre.

When I came upon the farm, there were sixty old apple trees, one half of which had been grafted five years; forty-five old peach trees, eighteen pear, twelve plum, and eight cherry trees, also two hundred and fifty apple trees, and eight hundred peach trees were set in 1846. Last spring I set one hundred apple, sixty pear, and fifty cherry trees. My young trees embrace many of the best and most celebrated varieties, such as the Baldwin, Hubbardston Nonsuch, Roxbury Russet, Danvers Winter Sweet, and William's Favorite. Among the pears, the Bartlett, Andrews, Louise Bon de Jersey, Fulton and Flemish Beauty, thirty of which are on Quince stocks. Among the cherry, the Black Tartarian, Early Duke and May Duke, and among the peaches there are the Crawford, early and late, Coolidge Favorite, George the Fourth, and Noblesse. All my peach trees, and one hundred and seventy of my small apple trees, are in land seeded to grass the year before my purchase. These trees I dig around monthly, from April to October, two to three feet distant from the trunk, and apply two shovels full of leached ashes to each tree in June, and wash the apple trees with strong soap suds. All my trees are upon land of a similar character, a deep, moist and warm soil, and those in the grass land which is highly manured have made as much growth as those in the tillage and I think will compare favorably with any in the county. I think that my peach trees have done better in grass land than they would in tillage, for they make as much growth of wood as will ripen well and I have not seen a twig winter-killed since I have been on the place.

I kept last winter, from the produce of the farm, and fifty-two hundred pounds of rowen bought in the spring, twenty-eight cows, one bull, six oxen and two horses. I have kept in my home pasture of sixty acres, on an average for five months ending Oct. 20th, (since which I have fed my mowing land)

twenty-two cows, one bull and one pair of oxen. My Haverhill pasture is fed by my dry cows and oxen, when not wanted for work on the farm. I sow plaster in April and alternately on one half of my home pasture at the rate of two hundred pounds per acre. This has improved the quality, and increased the quantity of feed full one third.

I have now, Nov. 15, on the farm, thirty-four cows, one bull, six oxen and two horses. I shall reduce my oxen, one yoke, and add sixteen to my present stock of cows, making fifty-five head of cattle, and two horses, which I think I have ample fodder to winter from the product of the farm, with nine tons of salt hay, bought for five dollars per ton, delivered on the river bank. Twenty dry cows, of my stock, will be kept on the island, to consume the hay and fodder raised there, and to be sold the next spring. All my stock kept at home are stabled every night in the year, and a good part of the day in winter. The manure in the barn cellar is mixed with loam or soil, twice or three times a week, in about equal quantities. Of swine, I have one breeding sow, five years old, kept in the cellar under the horse barn, and three of her spring litter kept in a piggery in the rear of the house, which I am fattening for family use. They are half blood Suffolk, and I have realized eighty-four dollars for pigs of this sow, sold at eight weeks of age and under, in one year.

Of manure, I have made the last year four hundred and eighty-five cart loads, besides seventy-five cords drawn from Haverhill. This manure has been applied to various crops and as top dressing as before specified. In August, I spread eighty loads of compost on my low land, as soon as the first crop of hay was taken off, and since Oct. 13, I have spread on other mowing land, forty-four loads of compost, and thirty-three cords of stable manure from Haverhill. The result of my experience, is, that stable manure applied as a top dressing to grass land, in November, is more beneficial and permanent in its effects upon the succeeding crops, than the same would be composted and spread in spring, taking into the account the labor and expense in composting the same. I have now on hand, about two hundred loads of manure, made in my barn

cellar, and twenty cords of stable manure, which I think, with what I shall make from my stock in future, will enable me to keep the farm in a gradual state of improvement, without purchasing any more manure.

The seven acres on the island, where wood was cut, was covered with a heavy crop of wild grass, brush and sprouts, from the stumps, when I purchased the farm. In May and June, 1850, I cut and mowed the same, and raked into winrows with a horse rake, made for the purpose, and burnt it on the ground ; then sowed grass seed, and harrowed thoroughly. That year I cut in August, a heavy burden of wild grass and weeds, about one half of which was unfit for cattle to eat ; this year I have moved most of it twice, and think it yielded three tons per acre, of good quality stock hay ; much of the first crop was six feet high, and resembled blue-joint, but I think it is a different grass. I have given it the name of island blue top. I also mowed eight acres of clover on the island where the spring rye grew, and the ashes were spread the last year, which I think yielded one and a half tons per acre. The second crop would have yielded three quarters of a ton per acre, most of which was ploughed in and sowed with rye and wheat, as before stated.

On the home lot, which is the forty-three and a half acre lot, where the dwelling house stands, I mowed thirty acres, making forty-five acres in all ; two acres of this lot have been taken for, and is occupied by a Railroad ; three acres are wood land on the river bank, one and a half acres occupied with the buildings, yards, and road to the river, the residue is in crops before specified. The corn fodder was grown on land taken from the pasture, and was fed to my cows in August and September. I measured my hay accurately the first day of this month, and allowing five hundred twenty-five cubic feet for a ton, I cut this year one hundred and twelve and a half tons, besides some thirty tons of straw and corn fodder.

My new milch cows are fed with four quarts broom seed, meal and shorts per day, in winter with cut hay. I have heretofore fed pretty extensively with carrots, but from careful experiments last winter, I am satisfied they do not increase the

quantity of milk. I averaged from twenty to twenty-five cows in milk, summer and winter. Most of the calves were sold when three or four days old. The principal part of the milk is sent to Haverhill every morning, and delivered to customers at four cents per quart, from April first to Oct. 1st, and from then to April 1st, at five cents per quart; the remainder is made into butter and cheese for the family's use. My cows are principally of the native breed; those that calve in spring and summer, give on an average, four and a half quarts of milk per day for the year, and those that calve in October and November, average five and a half quarts per day. Their milk is increased by going from hay to grass in spring; the others diminished by going from grass to hay in the fall.

I have raised more than thirteen hundred bushels of grain this year, viz: ten and two sixteenth bushels of wheat, twelve and a half bushels of barley, two hundred and fifty-two and a half bushels of oats, two hundred and fifty-six and three quarters bushels of rye. One acre on home lot produced thirty-eight and a half bushels; three hundred and thirty bushels of broom seed by estimation, worth as much per bushel for cattle and swine as oats. Pomeroy corn on home lot four hundred and sixteen baskets, the average weight, forty-three pounds per basket, same kind on the island, fifty-six baskets, weight forty-three pounds per basket. Whitman corn on the island, one hundred and six baskets, weight forty-one pounds per basket. Canada corn on the island, three hundred and eighty-four baskets, weight forty-six and a half pounds per basket. Each kind was measured in the same baskets. I shelled two baskets of the Canada corn which made one bushel and five and a half quarts. Allowing eighty pounds of ears for one bushel of shelled corn, I shall have five hundred and thirty-one and eighteen eightieths bushels, and forty-six baskets of small corn. The Canada corn yielded much the best according to the treatment, and was fit to harvest two weeks earlier than the other varieties.

My broom corn was a fair crop, but was injured somewhat by the frost the morning of the 25th of September. I think the yield of the five and a half acres will be full three thous-

and three hundred pounds of brush, and three hundred and thirty bushels of seed. I raised eighteen cart loads of pumpkins and squashes, mostly among my broom corn, which were fed principally to my cows. I believe broom corn exhausts the land less than any other hoed crop. My oats that grew on land where my broom corn was raised last year, yield one third more than those where my Indian corn was raised side by side, and manured alike. I attribute it to stocks of broom corn, which are not fit for fodder, being ploughed in, which is three quarters of the whole in bulk of the crop.

I had forty-two barrels of winter apples, principally greenings, from my old trees, and more than two hundred bushels of fall and cider apples, one hundred and eighty-six bushels of peaches, and pears, cherries, currants, &c., in abundance, for family use. Ninety-two bushels of potatoes, two hundred and sixty-four bushels of onions, and seven and a half bushels of white beans. I hire a man and his wife by the year, who occupy the L part of my house before mentioned, and who board the remainder of the help. An account of their expenses is kept daily, except so much as is consumed from the products of the farm.

EXPENSES FOR THE PRESENT YEAR.

| | |
|---|---|
| One man and wife by the year - - | $225 00 |
| " man by the year - - - - | 168 00 |
| " man six months, at $14 per month - | 84 00 |
| " " five " " 13 " " - - | 65 00 |
| " " two months and 17 days, $18 per month | 47 77 |
| " " " " " " " 20 " " - | 53 08 |
| " " one month, $14 per month - - | 14 00 |
| " " one month and 3 days, $14 per month - | 15 62 |
| Twenty-seven days work at $1 00 per day - | 27 00 |
| Six days work at 5 shillings per day - - | 5 00 |
| One man 12 days, rate of $12 per month - | 5 54 |
| " " 5½ " " " 13 " " - - | 2 75 |
| " " 21 " " " 10 " " - | 8 08 |
| One man for the winter, use of house, and $20 00, to tend the stock on the island - - | 20 00 |
| Salt hay, nine tons at $5 per ton - - | 45 00 |

| | |
|---|---|
| Grass seed | 18 13 |
| Manure | 220 00 |
| Ashes, 110 bushels at 13 cents per bushel | 14 30 |
| Leached ashes, 200 bushels at 6 cents per bushel | 12 00 |
| Plaster, 4 tons at $6 per ton | 24 00 |
| Blacksmith's bills estimated by last year | 33 00 |
| Furnishing and repairing farm tools | 18 25 |
| Toll over Haverhill bridge by the year | 20 00 |
| Town and county taxes for farm and stock | 56 82 |
| Shorts, five ton for feeding cows this winter $20 00 per ton | 100 00 |
| Butchers bill and groceries to date for help in farm house | 119 65 |
| Estimated by the same to April 1st, 1852, according to the number of hands kept in winter | 19 92 |
| Total expenses for current year | $1,441 91 |

ACCOUNT OF RECEIPTS OF FARM.

| | |
|---|---|
| Milk sold | $1,824 00 |
| Oats sold, 200 bushels at 45 cents per bushels | 90 00 |
| Rye sold, 135 " " 85 " " " | 114 75 |
| Corn for sale, 200 bushels 75 " " " | 150 00 |
| Rye " " 90 " 85 " " " | 76 50 |
| Wheat " " 10 " $1 50 " " | 15 00 |
| Broom brush, 3300 pounds at 10 cents per pound | 330 00 |
| Onions, sold 208 bushels, average 47 cents per bush. | 97 76 |
| Onions for sale 50 bushels at 47 cents per bushel | 23 50 |
| Peaches sold | 194 25 |
| Apples sold | 38 75 |
| Rhubarb and vegetables sold | 22 25 |
| Squashes sold | 26 00 |
| Rye straw for sale, 12 tons at $8 per ton | 96 00 |
| Calves sold | 44 00 |
| Pigs sold | 27 00 |
| Estimated profits of wintering 20 cows on the island | 200 00 |
| Receipts for the year | 3,369 76 |
| Deduct expenses | 1,441 91 |
| Net profits for the year | $1,927 85 |

It will be seen by the foregoing statements, that I have not changed any seed or grain sowed the present season, reserving as I have fifty-two and a half bushels of oats, thirty-one bushels of rye, and more than three hundred bushels of corn, besides barley, potatoes, fruit and various vegetables, more than sufficient for use of families, and farm purposes.

By reference to my daily account of farm work, I find that one hundred and forty-six day's work were performed in digging cellar and well on the island, drawing stone, brick and lumber, for the buildings, and making a new street in Bradford village, by the hands employed on the farm, whose wages are charged in preceding acconnt of farm expenses, and which, if deducted, would lessen the expenses and increase the profits of the farm, more than one hundred dollars. I have made no charge for my supervision, or the labor performed by my son on the farm, but the rent of house, fuel, fruit, vegetables, pork, butter, and numerous articles of family consumption, to say nothing of the satisfaction derived from making not only two, but even three blades of grass where but one grew before, I have considered a full compensation. In addition to the permanent improvements made in buildings, fences, &c., I think it will be conceded, that I have increased the productive capacity of the farm for the year to come, more than five hundred dollars.

My farm, with the buildings erected and repaired since my purchase, and including stock and tools, has cost me about seventeen thousand dollars. Now it will be perceived by the credit in the preceding account, that it has paid an interest on this investment of nearly twelve per cent. The remark has often been made to me by people in my vicinity to this effect, "well, you have got a good farm, and if you get a living from it and pay your expenses, you will do better than any who have owned it before you." Experience has proved the incorrectness of this remark so far as it relates to myself. I believe investments in farming, if the business is carried on with the system, energy, perseverance, economy and skill, which characterize commercial and manufacturing operations, would yield as profitable returns and with much less risk. This report has

been extended to a much greater length than I anticipated at its commencement, but had it been more brief, many facts and statements would have been omitted, which I have deemed important.

There is a reluctance among most farmers to write a report of their farming operations, for the reason that they know not where to begin, or where to end. I must confess that I have felt a difficulty of this kind to some extent, and I would respectfully suggest that a system of questions on farming be prepared similar in character to those of the New York State Agricultural Society, for the benefit of persons hereafter applying for the Society's premium.

## EXPERIMENTS ON MANURES.

The Committee on Experiments on Manures, Report, that no application has been made for the premiums offered. This is to be regretted, inasmuch as the subject has a direct and inseparable interest on a well conducted system of husbandry.

Great diversity of opinion has been entertained by farmers respecting the best method of applying manure to the growing crops. While some have directed to spread on the surface, and then turn under to the bottom of a deep furrow, that evaporation may not readily carry off its more volatile particles, others, on the contrary, insist that it should be spread on the surface, and thoroughly incorporated with the soil, by repeated harrowing. So far as our experience goes, the latter mode is preferable. The salts of animal manures buried deep in the soil, have a tendency to settle in the sub-soil, below the reach of the roots of plants, which, if admixed near the surface, give immediate aid to vegetation.

If evaporation of manure near the surface be more abundant, do not the absorbant vessels of the leaf, drink in the gaseous fluid with the greatest avidity? Is not evaporation then, one of the most efficacious means of rapidly advancing the growing crop?

The custom has prevailed, and still does, to a considerable extent, to haul on the top dressing for grass lands, in the autumn, and leave it in heaps to be spread in the spring. We think a better course is to spread the manure as it is hauled upon the land. It thus protects the roots of the grass, and being settled down by the dissolving snows of spring, has the greatest effect.

Every resource within reach of the cultivator for the increase of his manure, should carefully be made available. Leaves of trees, turf from waste places, and the clearing of drains in low lands, when spread over the barn, or hog yard, soon become valuable.

On many farms, an inexhaustible supply of material for the manufacture of a valuable compost, may be found in the peat meadows. It is, indeed, manure itself, for all dry, gravelly, or sandy soils. As a material for compost, peat has been much neglected.

Were the privies of farmers so constructed, as to have a cellar under them, tightly planked, say eight feet long, six feet wide, and four feet deep, with a door on the back side, the length of the cellar, swinging outward, and upward from the floor, (the building might be placed three feet from the ground with an excavation of one or two feet on the back side, to facilitate the removal of the contents,) the cellar supplied with a cord of peat mud, once a month, and as often removed ; the farmer, having a family of six or eight persons, might in this way obtain a dozen cords of the most fertilizing manure, worth on the farm, as manure usually sells in the larger towns, at least sixty dollars. A great annual loss is sustained by the fatmers of the county, through want of economy, in this respect. We trust that the liberal premiums offered, will induce farmers in future, to make careful and exact experiments in the composition and use of manure, thereby not only benefitting themselves, but also promoting the great cause of agriculture.

Subjoined is a letter from Richard P. Waters, Esq., one of the Committee, giving his practice of increasing the manure heap.

For the Committee, JOSIAH NEWHALL.

Lynnfield, Dec. 10, 1851.

RICHARD P. WATERS'S STATEMENT.

As no application has been made for premiums on "Experiments on Manure," during the present year, I comply with your request, and state briefly my own practice for several years past to increase the manure heap.

In the month of August or September, we get out from one to two hundred ox cart loads of swamp muck, and lay it near by in the pasture to remain for the winter. During the winter and spring, it becomes pulverized by the action of the weather. So that by the time our planting is over in the spring, it is like an ash heap, and is then taken to the barn cellar, and yard, both of which receive a good dressing from ten to twelve inches thick. We then procure from Salem, two to four cords of stable manure, and spread it over the entire surface of the yard and cellar. We now let the hogs knock it over during the day, for several months, scattering corn over the surface, which induces them to pretty active employment in working over the compost. At night the hogs take lodgings in their own stye, which communicates with the barn cellar and yard, and the cows occupy the premises for the night. As soon as the cows are put out to pasture in the morning, the hogs are let into the yard again, and thus the work is constantly going on, the hogs performing a good service by day, and the cattle enriching the compost during the night. We have now one hundred ox cart loads of this manure, made during the past season; and shall make quite as much more during the winter and spring.

Cherry Hill Farm, Beverly, Nov. 28, 1851.

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## INTRODUCTION OF NEW FRUITS.

The Committee on the Introduction of New Fruits respectfully Report:

That several specimens of fruit were presented for their examination, among which were five varieties of apples, by the

Messrs. Lakes, of Topsfield. Three varieties of nectarines, by Mr. Samuel Slocumb, of Haverhill. Two or three varieties of peaches, by Mr. W. B. Cole, of Boxford. Some also, by Mr. Samuel Kimball, of the same place; also, by Mr. Samuel Sawyer, of Methuen. Two kinds of grapes, by Mr. Abel Burnham, of Gloucester. One specimen, each, by Dr. Sanborn, and Mr. W. B. Slocumb, of Haverhill. Also, one, by Mr. John Adams, of Newbury. Besides these there were several other specimens, which, from the derangement of the fruit, misplacement of the names, and the want of written statements, the Committee have it not in their power particularly to designate, among which were tomatoes of different shapes, color and size.

The fruits presented, were generally of a fair size and inviting appearance, and may, in the result, be found of such merit as to recommend themselves to general culture; but, with the exceptions specified below, so far as the Committee, with the limited information, given by those who exhibited them, could judge, were not of such merit as to entitle them to the special notice of the Society.

Among the exceptions to this general remark, the Committee will mention, in the first place, a purple or dark seedling Nectarine, presented by Mr. Slocumb, of Haverhill, which was in the state of maturity on the anniversary day, which the Commlttee thought a valuable fruit, possessing many fine qualities. The same observation is applicable to a peach presented by Mr. Kimball, of Boxford, called the yellow Alberge. Also to one of the specimens without name, presented by Mr. Sawyer, of Methuen. The Committee also mention as an exception to the same general remark, a seedling purple grape, raised and presented by Mr. Abel Burnham, of Gloucester. This is a pleasant fruit, ripens early, and will, without doubt find favor among those who have a taste for good fruit. It wants something of sprightliness in its flavor, and the berries are too small. The Committee do not suppose the value of fruit to depend mostly on its size, yet they must think, that what may be called a medium size, will give the most pleasure to the sight, and prove most grateful to the taste.

While the Committee mention these exceptions to their general remarks, and have no doubt they would be esteemed as a valuable variety in most gardens, and meet with a welcome on most tables, still they do not think them of such decided worth as to entitle them to the awards offered by the Society.

The grapes presented by Dr. Sanborn, were without question the kind known in the northern part of the county, as the Walker grape, and such the Committee believe to be the case with two or three other specimens, especially those exhibited by Mr. John Adams, of Newbury. This is a valuable fruit, and is somewhat extensively cultivated, but unhappily under a considerable variety of names. The Committee will have occasion to advert to this fruit again in a subsequent part of this report.

From considerations, which the Committee believe if set forth would justify them, they propose to fill out their report by some rather disconnected remarks on the cultivation of the grape in this county. They will commence by stating it as their deep conviction that an enlightened regard to the prosperity, health, enjoyment, and morals of the community, would lead to an increased attention to the cultivation of fruit, and when the observation is true in regard to fruit generally, it is specially and emphatically so in regard to the grape. For in the first place the soil regarded chemically is known to possess to a great extent, and a rich degree, the elements which are required to give a vigorous and healthful growth, both to the wood and fruit of the vine. It is also believed there is quite as great an extent of territory adapted to the culture of this, as to that of any other produce. This adaptation of soil to grape culture, made manifest by its chemical constituents is still more forcibly impressed upon us by the fact that the vine springs up, grows rapidly, and produces abundantly in every part of the county, in spite of all the violences that are in one form or other practised upon it. It is doubtful whether there is a farmer, we might almost say a gardener, who, if he would suffer the vines to live and grow, that spring up of their own accord, but would in a very few years have an abundant supply of this delicious and highly valuable fruit.

2. In the next place, when cultivated, the grape vine will come into bearing sooner than the greater portion of other fruits. If a man has not a vine on his own land, and is not disposed to purchase one, he has only to take his knife and cut a branch from the numerous vines that grow by the way side, or ask his neighbor to suffer him to do this, with one growing in his neighbor's lot, put this cutting in the earth, perhaps occasionally water the same, and in a very short time he will be refreshed by the fruit which this will in great abundance afford him.

3. There is less expense in cultivating the vine than in cultivating other fruit. We know well that great labor and expense may with good economy, be bestowed on the vine, but, we know the generality of men will not, perhaps cannot do this, and we feel happy in being able to say that they may have a rich supply of this fruit without it.

4. Less space of earth is necessary in the cultivation of the vine, than in most other kinds of fruit. There is not a resident in the city or county who possesses two feet square of earth, and a ten foot square building, but might for two or more months furnish his family with a rich supply of this fruit. Nor one who has wood or pasture land, but who, after supplying his family, might fill his carts for the accommodation of those who depend on the market, both for the substantials and delicacies of life.

5. Because the grape affords a most grateful refreshment to the sick, the infirm and aged. The Committee believe they are supported by observation, and by the authority of the medical faculty in saying that grapes are among the most innocent fruits for those who are placed upon the sick bed, and that they have also a restorative influence, and certainly help rather than hinder the favorable operation of most medicines.

6. Because when set once they may be expected to live, grow, and produce fruit for many years. The number of years they have been known to continue seems almost incredible. It would not be easy to point out a period which they would not survive and what seems worthy of record is that though in the process of years the amount of their produce

may diminish in a small degree, the quality of the fruit becomes of a higher flavor and richer quality.

If the question be asked, what kind, whether foreign or native grapes, should be sought for cultivation, the Committee unhesitatingly answer the native. In fact, the question practically is, native or none. Those able to possess green houses may gratify themselves with grapes of other climes, and the Committee would say with all earnestness, let them do it, they will thereby add something to their own comfort, something perhaps to their wealth, and often by their liberal distribution to the sick and well, will greatly increase the amount of human enjoyment. But of foreign, there never has and at present there cannot be anything like a general diffusion or liberal supply of this fruit. The cultivation of the foreign kinds costs more time and money than the great body of the community have to bestow. What changes time, increase of knowledge, and change of habits may produce, the Committee do not undertake to say, but they have no hesitation in committing themselves so far as to say that the time has not yet come, and will not soon come, when there will be any general supply of any grapes, but those of the native kind, and they are ready to say, that they do not think this fact need be attended with any great sorrow or grief. They are not sure, separate from the influence of prejudice and habit, that the FAR OFF are better than the NEAR BY, certainly not in the state in which we can have them. The avidity with which the grapes of this country are sought when they can be obtained from the woods and wild places about, the gladness, with which they are received, when gratuitously bestowed, the price which they demand when exposed in market, are sufficient proofs that the fruit as it grows in this state, is in sufficient demand to justify an extensive cultivation of it, and to leave no just ground of grief, that we cannot possess those which adorn and bless other lands. God has divided these things as it has pleased him, and the Committee are fully persuaded that He has not left us in this particular without witness that He is good, and that with Him there is no respect of persons. They must believe the grape of this country possesses as many valuable properties as those of

other countries of a similar latitude, or perhaps we should say of a similar clime. Why should it not be so? Ours may not possess some of the excellences which are found in those abroad. On the other hand, there are qualities of a valuable nature in ours, which theirs have not. A warmer climate may produce better fruit than one that is cold, but this is not the question now before us. The question is, can foreign grapes be produced generally which upon the whole are better than ours. The Committee think not. There are peculiarities which it is thought well to mention in the flavor, by which many of the grapes of this and some other countries are distinguished from each other. This is the foxy taste of ours, and musky taste of theirs. The Committee are not certain but these flavors are equally unpleasant at first to all, or that they do not become equally pleasant after a little use. The greatest difference perhaps may be found in the fact that one has by a train of circumstances not important to mention, worked itself into fashionable connection, the other is yet mixed with uncultivated life. This disrelish to the foxy taste of our grapes which many entertain, may be, as many such aversions have been, overcome. The oldest portions of the community can well recollect the time when many would leave the table, and some would faint, if muskmelons happened to be a part of the dessert. The tomato and rhubarb plant have worked their way to general favor at a much later period. A hundred years have not been numbered since a highly respectable physician in Virginia, whose name does not at this moment occur to the Committee, with his family, were thought to have an idiosyncrasy in their constitution, which enabled them to use the tomato as food, while it would operate as a poison upon others.

Time and use may produce as great a change in regard to the foxy taste of our grape. But even if it should not; if the foxy taste be a serious objection, a difficulty which cannot be overcome, it should be recollected that it is an objection which lies against only a part, and not always the best part of our grapes. Many indeed of those grapes which have received the name of the fox have not as many have supposed received it, because they had anything of this flavor, but because they

are in fact destitute of it, and because having something of the acid in them. They have been ranked with those in the fable which the fox is said to have rejected and defamed, because he found himself unable to reach the branches loaded with this delicious fruit. In the Middle and Southern states, many, some say most of the native grapes have a rancid, and if you please so to call it, a foxy taste and smell, and receive the name from this circumstance. But it is not so certainly in many parts of this commonwealth. Here the term is mostly applied to an acid fruit, which some call the frost or winter grape. If then, any dislike the foxy flavor, they are under no constraint to cultivate them, there are many other varieties, and of good qualities, which have nothing of this peculiarity about them.

### PRODUCTION OF VINES.

Vines may be produced by planting seed, putting down layers, setting out portions or cuttings of vines containing two or more joints, by dividing the roots, by engrafting and inoculation.

By the first process new varieties may be obtained, and perhaps some of a better quality, and a seedling vine if the fruit be good, is more valuable than one obtained in any other way, but some years must intervene before fruit in any great quantities and in a fully matured state can be secured in this way. Besides, experience has shown that a very large portion of vines obtained in this way prove to be male, so that not unfrequently after years of labor and waiting those who resort to this course find that they have labored in vain.

Vines raised as layers are apt to be feeble for several years, and seldom become as vigorous and productive as those raised by cuttings. In preparing cuttings which should be taken from branches of the year's before growth, the wood of the upper and lower end should be cut away very near to the bud or joint, and great caution used not to split the wood or bruise the bud. Some use cuttings of a single joint, cutting away the wood to within an inch on each side of the bud, and others even split the bud and place the parts a few inches deep in the earth. In this last method a vine, if obtained, will be

later in coming into bearing, but will have a stronger resemblance, and possess more of the desirable qualities of a seedling vine, than those obtained in any of what may be with propriety called artificial means.

If persons wish to secure different varieties of fruit, and have vines which they are willing to give up for the purpose, the readiest way is to resort to grafting, or inoculation. By this process, fruit may often be obtained the first year, and very commonly the second, and in the operation, there is very little more labor or skill required, than in a like process on apple or pear trees.

### INFLUENCE OF SOIL, &c.

There is no fruit with which the Committee are acquainted, upon which, in their opinion, cultivation, soil, location, manure, pruning, &c., produce so great changes as they do upon the grape. Its size, shape, color, flavor, time of maturing, are all obviously affected by these influences. We have a striking illustration of this remark in the Walker grape, already referred to. This is a fruit which has long been known. The original vine is still standing, and thriving in its native place, in East Haverhill. The fruit is fine, and being held in high estimation, has been cultivated somewhat extensively in the north part of the county, and as it has been spread about it has received almost as many names as there have been persons who have cultivated it, or places into which it has been introduced. There has not a year passed, as the Committee believe, since fruits have been exhibited at our annual fair, but specimens of this grape have been offered. In almost every instance, it has come under different names. The present year there were certainly two, the Committee believe three specimens, exhibited, neither of them bearing the original name, though upon a little inquiry, it was ascertained beyond a doubt, that the vine in Haverhill, was the source from which they came. The shape, color and flavor of these specimens, have been almost as various as their names, and they have been spoken of in our reports, as different fruits. The Committee do not think it strange that it should be so. For

though the discriminating marks of this fruit are sufficiently obvious to those somewhat familiar with it, they are such as might well pass unnoticed in a hasty and confused examination. One thing is worthy of notice, which is, that under whatever name it has been spoken of, it has always been pronounced, and with great propriety, a good fruit. This fruit in size is a little larger than most of our grapes, remains longer in a state of eating, and when fully ripened in a favorable situation, the outward skin loses in a great degree its tough or leathery character, the pulp, which encloses the seed, changes into a more tender and liquid state, and the whole grape becomes a delicious morsel to be eaten, and enjoyed as most foreign grapes, or as the blackberry and raspberry, fruits so much esteemed by all. This fruit is rather oblong in shape, varying in color from what some would call a white to a flesh, and in some instances to a light purple or crimson. The vine is a good bearer, and in common years, with usual cultivation, the fruit will begin to ripen about the middle of September, and if not injured by frost, will continue on the vines till the middle of October, and perhaps later, and may be kept, if carefully gathered, through November. The Committee venture to recommend this as a fruit worth cultivation, though not of that high character contemplated in the offer of premiums.

The Chairman of this Committee has a variety of this grape, which, in the opinion of many competent judges, is thought to possess qualities which give it a decided preference over the Haverhill grape, which may be regarded as the original stock. This was not exhibited at the anniversary.

### DIVERSITY IN THE QUALITIES OF GRAPES.

Grapes, like other fruit, vary in size, shape, color, time of ripening, length of time they can be preserved, adaptation to particular uses, and in many other circumstances. Those about to commence grape orchards, or to multiply or enlarge those already in existence, should have regard to this, and make such selections as will in the result prove most gratifying or profitable to them. There are now in the county, in process of cultivation, various kinds, from which selections might be made, which would secure a constant supply of fruit in a state

of maturity and freshness, from the middle of August till the month of February, and in most seasons from an earlier to a later period.

### UNPRODUCTIVE VINES.

Vines raised from seed of the native grape, are very apt to prove staminate, these of course produce no fruit, and are therefore rejected most generally by those concerned in grape culture. The Committee however state, that from physical considerations, which they deem supported by sundry experiments, they are led to think that it is beneficial both for the strength and health of the vine, the perfection of the fruit, the richness of its flavor and quantity of the yield, to suffer some of these vines to occupy a place in the Vineyard.

### CULTIVATION AND TRAINING THE VINE.

In the cultivation of the grape, it should be remembered that the tendency of the vine is to a luxuriant growth of wood. Its physical construction encourages this. The study of the vinegrower should be, as far as he may, to counteract this tendency and to turn the nutritious circulation from the wood to the fruit, and thus increase the size, but particularly the richness of it. In accomplishing this result, regard must be had to the character of the soil, the mode of trimming and training, and the nutritive ingredients applied to its roots. The Committee would enlarge a little on these subjects were it not that it would unduly extend this report. Much good instruction may be found in various books now before the public. As a general observation they will say in respect to soil, that it should be sandy and warm, in preference to that which is clayey and wet. The manure used, should not be of an active and exciting character. As a single article, no one is so universally good as the trimmings of the vines, and small branches of trees placed upon the earth about the roots, to the extent of several feet. In places subject to early frost, training the vine near the earth horizontally, is a safe practice and where the air is particularly damp from any cause, training to an upright stake or pole, to the height of ten or more feet has been found so obviously beneficial as to recommend this course to

the attention of all engaged in the culture of the grape. This last course is often beneficial, because, by almost constant motion of the pole caused by the wind, the fruit will be protected from being scalded by the sun's rays, an injury to which it is very liable in many situations, and also very much from the mould. For the same reason a common trellis, composed of rather flexible materials, is to be preferred to one constructed of timber, so firm as not to yield at all to the usual motions of the wind. The best fruit ever obtained is that which grows upon vines attached to the longest and most easily agitated limbs of forest or cultivated trees. The principle involved in this last observation applies with almost or quite as great force to other fruits, and suggests a consideration of a practical nature in relation to general pruning. A leading question in trimming is the comparative advantages between heading IN and thinning OUT. The Committee have been led to suppose that extremes here should be avoided. If headed in too much, the tree and limbs will be moved but slightly by the common winds. This will expose the bark on the trunk and large branches to be burned, and the fruit scalded by our hot and dry summer sun. If thinning out is exclusively adopted, the wind blowing upon the wide spread branches will be apt to strain and split the lower parts of the large branches, and often to loosen the bark, and to bruise if not to cause the fruit to fall. Grapes being a smaller fruit will remain uninjured by an agitation which would destroy the apple, pear, or any of the large and heavy fruits, but still will often suffer if exposed to violent motion. Trees of almost any kind where they can be spared, afford, so to speak the best trellis for vines, certainly in cases where but little labor can be devoted to them.

But while the Committee judge it well to make this statement, in respect of methods of cultivation, they would at the same time say to all who possess any love of fruit, or who have families that like it, take any method that pleases them, or which their friends, with or without experience, or any books written expressly on the subject, are pleased to recommend, for in either way in a very few years, even should the method pursued not be the most successful, still it will result in a gener-

ous supply of fruit, and of a quality sufficiently excellent to afford great satisfaction in the use. If there be a tree that can be spared, set a vine beside it, and let it spread itself out upon its branches. If there be a wall or fence it will well answer the place of a costly trellis. If there be a rock upon which, to take an illustration from the scripture, no one ploughs, let a vine cover it, and let no one neglect to cultivate, altogether, because he has not time or means to cultivate in the most scientific and expensive manner. The example set by Mr. Daniel Rogers, in Newbury, is good. Some years since he set a vine taken from the woodland beside a large rock near his house. This vine soon spread out and covered the rock, and has produced bountifully. Two years since, when visited by the chariman of the Committee, it was judged to have at least seven bushels of a very good grape upon its branches, and should it continue to increase as it has done for years past, there is no reason to doubt but double this quantity may be gathered from it. This vine was reported to the Society in 1850, a large specimen of the grapes exhibited, and a pretty full account given in writing concerning it, but was, by some mistake, no doubt, overlooked and unnoticed in the Society's report.

A little fruit is better than none, and that which the many may call indifferent, possesses excellencies enough to justify the cultivation of it where better cannot be obtained. One fact is certain that there are no grapes growing in our wild lands but are anxiously sought and eaten with avidity, nor any that are cultivated but will be thankfully received by all if presented to them, none but will be purchased if exposed in the market, and we may add none but what will be stolen if opportunities are discovered. From all which circumstances the Committee feel justified in saying, that in the unprejudiced estimation of the community, the grapes of our own county are well worth cultivation, and that a much greater supply of them is required to satisfy the general demand.

GARDNER B. PERRY, } Committee
GEORGE W. CARR. } Present.

## ON BEES AND HONEY.

The Committee on Bees and Honey, after having attended to the duties assigned them, agreed upon the distribution of premiums, as follows:

To Moody Ordway, of West Newbury, for a working hive, with well filled Nadir-boxes - - $3 00

To George W. Sawyer, of Boxford, for a hive, and glass globe of honey - - - - 1 00

To E. S. Parker, of Groveland, for samples of honey in boxes - - - - - 1 00

To George French, of Andover, for a box of honey 1 00

To Alva Kendall, of Salem, for a handsome specimen of honey, in a glazed box - - - 1 00

There was also offered a new empty hive, by Alva Kendall, of which hive the Committee formed a very favorable opinion, and to the owner of which, they assigned a premium of - - - - 1 00

The above named articles were all that were presented for inspection, and your Committee desire to express their deep regret thereat. If the small number of hives and boxes offered is any indication of the extent to which the culture of the honey bee, is carried in the county of Essex, they still further regret that so interesting and profitable a pursuit should be so much neglected by our farmers. There must be a vast quantity of honey that lies ungathered deep down in the sweet cups of the wild flowers, wasting its luscious sweetness upon the passing winds. There must be in our county, a very sparse population of

> "Sweet honey-sucking bees,
> That out of summer velvet buds
> Do bear away the pillage of the fields."

Just one hive, four boxes, and one glass globe, as samples of all the honey culture of this stout county of Essex, with a more dense rural population than can be found in any other county of the State! Why, do the farmers know that such honey as was presented to the inspection of the Committee, is worth, at retail, twenty-five cents a pound, and is bought by wholesale

buyers in the market-towns at seventeen to twenty cents a pound? Do they know that a properly planned, properly made, and properly managed hive will yield from thirty to fifty pounds a season of just such honey, for which just such prices may be obtained? Do they once think that a dozen hives may be managed with almost nothing of care, and nothing of cost, after the first outlay! Why, "good friends, sweet friends," as said the man in the play, let us look at it a moment, in a practical and economical light. A properly made hive, of the right construction, one that shall save the lives of all "the little busy bees," as long as their bounteous maker intended they should live, (for your Committee are no friends to that cruel system of management, which kills the bees to get the honey—murder and robbery both combined)—such a hive, of best stock and well painted, may be bought for four dollars and fifty cents. A new swarm may be bought and put therein for, say at a high figure, four dollars more. Throwing out of the account, the fact that in a good season, from an early stock, you will get ten to fifteen pounds of honey, the first year of the swarm, over and above what the bees will need for carrying them through their first winter, the hive and swarm will stand you, with interest of one year on the outlay, at a cost of nine dollars on the opening of the next season of the purchase. Bear in mind, that the Committee speak of a properly constructed hive, and they will give its details before closing their report. Here then is an investment of nine dollars, and what are the probable proceeds. We say probable, though the probability of the return is an almost certainty. The stock shall have wintered comfortably and prosperously, and have reached its second season, in good case, in good heart, and in goodly numbers from a bounteous and fertile queen mother. Such a stock will gather, after filling up its own supplies for the next winter, say at a small figure, forty pounds of honey, worth as above stated, seventeen to twenty cents, sold to the wholesale dealer, and twenty-five cents if retailed for family supply. In the one case the proceeds are from six dollars and eighty cents to eight dollars, and in the other ten dollars. Not a bad business for our farming friends

is this, by any means. For it is at the rates of seventy-five, eighty-eight, and one hundred and eleven per cent respectively, and a much better investment than any that can be made just now, in either cotton or woolen mills, or rail road stocks. The Commitee earnestly desire to call the attention of the Essex farmers, and of the rural population generally, to the consideration of this interesting subject, and will present a few thoughts for them to reflect upon.

No subject under the general head of Natural History, is more interesting, and none presents a wider field for curious investigation, than that under consideration, The "Apis Mellifica," that is the "Honey gathering bee," of Linnæus, has attracted a great share of attention from the earliest times. Its industry has been the constant theme of admiration and praise. Its instinct, or rather its almost reason; its skill and frugality of means; its watchful sagacity and boldness in defence of property and home; its well organized form of social life; its steady application of the best adapted means to bring about a determinate result; its mathematical economy of material in the fabric of its cell; its studious and successful concealment of the "modus et tempus copulandi," of the male and female; the uncertainty of the locality of the organs by which the impressions of sight, touch, taste, sound and smell are produced, in fine its entire economy, have been discussed by observers and naturalists, sung about by poets, commented upon, and laboriously, nay, even acrimoniously argued and disputed about by philosophers and apiarians, from the earliest ages. Particularly, to quote the language of the Rev. Mr. Dunbar, of Scotland, in the naturalist's library, "have the poet and philosopher, each delighted in the study of an insect, whose nature and habits afford so ample scope for enquiry and contemplation; and even the less intellectual peasant, while not insensible of the profit arising from its judicious culture, has regarded with pleasure and admiration, its ingenious operations and unceasing activity." The venerable Kirby happily observes of them, "wise in their government, diligent and active in their employments, devoted to their young and to their queen, the bees read a lecture to mankind that exemplifies

the oriental and Biblical name, DEBORAH, SHE THAT SPEAKETH," and her speech is like Deborah's, both sweet and wise. Unlike most insects, they have been brought under successful cultivation and have been made, like the Bombyx Mori, the Silk Worm, of service to man, yielding to him those delicious sweets of the flowers, of the forests and of the fields, which no other means can supply, and the supply of which never exhausts nor impoverishes the fountains that yield them. Some have even contended that the bee is inspired. Saith the Koran, p. 219—"The Lord spake by inspiration unto the bee, saying "Provide thee houses in the mountains and in the trees, then eat of every kind of fruit, and walk in the beaten paths of thy Lord."

In the Arabic Zoological Dictionary, called HAYAT ALHAYAN, or "Life of Animals," written by KEMALOLIN MOHAMMED ALDAMISI, who died A. D. 1405, we find this passage: "I have already said, in what goes before in the chapter on Flies, that the Prophet Mohammed, on whom may God's benediction and peace rest, has declared that "*all flies go to hell ,except bees.*" The Holy Prophet of the Turks, probably uttered this wise saying, on a sticky, muggy, hot dog-day in August, with special and spiteful reference to some pertinacious "Musca Domestica," that resolutely and provokingly buzzed about and titillated his holy nose. It shows, however, conclusively, that even if under that great provocation, a provocation that is in the words of Dogberry, "very tolerable and not to be borne," the high character which the bee had inherited from a distinguishod ancestry, and which he had faithfully preserved in that day, effectually protected him from the Anathema Maranatha, which in the judgment of the great Prophet of the Turks, consigned all other flies to so tepid a locality. Your Committee are not disposed to enter into argument with the Holy Mussulman, as to the correctness of his assertion of the future destiny of flies. They rather prefer to acquiesce in the decision, so far as it goes, especially in relation to those murderers of morning naps, and after-dinner snoozes—the house flies—thanking the prophet for setting so high a value on the bee as to save him from a similar doom.

This report is not the place in which to publish an exact treatise upon the management of bees, or an essay upon bee hives. And yet the opportunity should not be omitted of slightly glancing at the one, and of endeavoring to throw out some useful practical hints upon the other.

Everybody, certainly every farmer, knows, or ought to know, and if he does not, he will pardon us for telling it, that all naturalists and apiarians are agreed that the honey bee, *Genus* Apis Mellifica, is of the Order *Hymenoptera*, or Insects having four membranaceous wings. Of this genus, Linnæus has enumerated fifty-five species; the Dictionary of Natural Sciences, (Dictionaire des Sciences Naturelles,) characterizes seventy, and Mr. Kirby, in his Monographia Apium Angliæ, has described two hundred and twenty, natives of England.* The domestic honey bee belonging to what are called perfect societies of insects, and every association of bees comprises three classes of individuals, the mother, commonly called the queen, the working bees, and the drones. There is but one queen in the hive, the mother, and as the instinct which God has granted, indicates the mistress, of the swarm. By the month of January and February, in any given year, the population of a hive is reduced by death to its lowest point, for the life of a working-bee does not extend beyond eight months, and the deposition of eggs by the queen-mother to any great extent, is interrupted during the severe months of winter. About the beginning of March, it recommences, and increases during April, May, and June, to such almost incredible amount, that the sparse winter population of scarcely three thousand, is hurried up to twelve thousand, fifteen thousand, and twenty thousand and more. And every bee-keeper is aware, that during the swarming months of May, June and July, a swarming hive is literally overpouring in numbers, and that for want of room and air, in the inside, they hang in countless clusters upon the outside front of the hive. This is *no sure indication of swarming*, but when a swarm does rise, in time of such crowding, the front of the hive is pretty well cleared of bees.

*But one species is known in the United States, and that is the subject of our report.

Ten or twelve days more will replenish the population to such extent, that a second swarm is not unfrequently sent off. A third swarm sometimes succeeds, but is quite undesirable, as it will be rather small, and is too exhausting to the parent stock, exposing it to the attacks of that atrocious enemy of all bees, and pest of all bee-keepers, the bee-moth, (Tinea mellonella.) May they sojourn, from this time forth and forever, where the Holy Prophet of the Turks sent "all flies but bees."

The mother-bee is easily recognized by her long, taper body, short wings and slow gait. In ordinary hives, she is seldom, if ever, seen. Before depositing her eggs, she carefully examines the cell, by putting in her head, and if satisfied, she inserts the point of the abdomen, exudes an egg which clings to the side and bottom of the cell, by some adhesive substance with which it is coated. The cells for the reception of worker-eggs are the common cells of the comb, those for drones are somewhat larger, and those for queen-mothers, larger yet thimble-shaped, and built, mouth downward, upon the edge of the comb. Of worker-eggs, the queen deposits, say from twelve to thirty thousand, of drone eggs from five hundred to two thousand, and of queen eggs not more than five to eight. As new queens are born, if swarming is desired and allowed, one leaves with the swarm, and those that remain, swarming having ceased, are supposed to be destroyed by the strongest remaining queen. We say one leaves, not specifying whether it be the old queen or a new born one, as that is a point upon which Apiarians are not agreed, and this is not the place to go upon points of "doubtful disputation." To the queen mother, the bees seem to pay the greatest respect, and to take the most special care to preserve her life and health. She is indeed the life of the hive, and might, as our common mother was called by Adam, be called the Eve of the swarm, "for she is the mother of all living" therein.

> "She lives, and pours through all, the accordant soul;
> She dies, and by her death dissolves the whole."

The writer of this report has often seen and handled her, and when seen, within the hive, among the bees, he has seen

that all the bees around her turned their heads towards her, and, if she stopped, they formed a sort of circle about her, while some fondled and licked her with their probosces, and some supplied her with food. She is very gentle in her disposition, *never uttering an angry word*, and can, only after the greatest provocation, and scarcely then, be induced to attempt to sting. Beautiful pattern for all her sex! May they imitate her "in all her imitable perfections!"

The life of the reigning or queen-mother, by a beautiful adaptation of Divine Providence, to the wants of the community over which she presides, herself supplying her own faithful subjects, is prolonged to the period of four or five years. If she dies at such time of the year, when there is no young brood-comb in the hive, say in November, December, January, and possibly, February, the stock must inevitably die out and perish. But if she dies, or is lost, when there is young brood-comb in the hive, then the worker-bees, wisely provided with the appropriate instinct, take a worm, of three or four days old, which, under the ordinary operation, would have been a worker-bee, and, by means wholly unexplained, convert it into a queen or mother-bee. Of the fact, there is not a doubt. As the man said in the fable of the Chameleon, so the writer says having witnessed the operation, "I've seen, and sure I ought to know."

The subject is one of great detail, as well as of great curiosity, and would occupy too much space to be here discussed. It is true, that Apiarians are at issue upon the modus, and give varied explanations, but the best authorities all agree, that when there is a loss of the queen at the time of a supply of brood-comb, the workers can make good the loss. Our own theory is, that the workers are all BARREN FEMALES, the organs of generation not being perfected for the production of eggs; that on the occasion of the loss of the queen, these organs are, in the worker-worm selected, by some mode and by some appliances known to the instinct of the bees, duly and suitably elaborated for the production of eggs. A difficulty is, and not a small one, that the form and size, and length of sting, are all, also, altered. As our excellent friend, Sir Roger

de Coverley says, in the Spectator, "a good deal may be said on both sides of the question," and a good deal has been said and written, and scolded, and we do not think it worth while to bother the Essex bee-masters about the arguments. Let us be thankful for the thoughtful, wise, and excellent provision of the bee's great Creator, and go on with our report.

We will then say a word or two about the great ARISTOCRATS of the hive, applying that much abused word to those therein, who live on the labors of others, themselves furnishing neither capital, skill nor work, and whose only office is to assist in propagating the race. A useful and necessary, and indispensable vocation it is, the Committee are willing to concede, but they wish the drones had something besides, about which to employ their leisure moments,—

> Those moments' of leisure,
> Not devoted to pleasure.—*Old Song.*

The drones then, are, with the exception before specified, the regular-do-nothings of the hive; your fine gentlemen-at-large, and very portly and well-fed gentlemen too. "They toil not, neither do they spin; they lay not up in garners;" they add nothing to the common stock, and yet, like some animals, that go about on four legs less—like some noisy fellows of the GENUS HOMO—they make more noise and fuss, than all the rest of the tenants of the hive put together. Like furious orators on town-meeting days, and at political caucuses, they keep up a miscellaneous kind of bother and buzz, with the intent, very likely, to make up in noise, what they lack in sense, and to draw upon their inflated selves the eyes of the "dear people," upon WHOSE HONEY THEY FEED, though contributing nothing thereto. With both these classes, as Tony Lumpkin says, "IT'S ALL BUZZ!"

Fine gentlemen-hexapeds are these same drones, who get up late and go to bed early, sauntering out, at about ten o'clock in the forenoon, after the sun has dried up all perilous fogs and sickly dampness, and retiring to the inner hive, by four o'clock in the afternoon, to escape all risk of the "cold evening dew." These are like to your Sybarites of Ancient Italy, who slept on beds of roses, and got a pain the side, if one rose-leaf un-

der their precious ribs, was accidentally doubled up; men, these, (pardon us, O other men, for calling them MEN,) FELLOWS, who, for fear of cold mornings and foggy evenings, never saw the sun rise nor set; who prohibited all such troublesome and pestilent "murderers of sleep" as Black and White-Smiths, Brass or Tin-workers, Fish-venders with horrible Tin-Horns, or puffy Conch-Shells; who suffered no crowing Cocks, Shanhae nor Chittagong; no cackling Hens, Dorking nor Dominique; no barking Dogs, nor "curs of low degree"; no caterwauling, miauling cats, nor any other animal nor thing that could perpetrate a noise, to dwell within their night-hushed walls, that neither their early vesperal sleep might be prevented, nor their late matutinal dozings be disturbed; whose laws even took cognizance of the offence of a man's own snorings, whereby he waked his own self from his own slumber. These were all fat, fair, full-fed fellows, such as Will Shakspeare, speaks of, by the mouth of Julius Cæsar, when he says to Mark Antony,

> "Let me have men about me that are fat,
> Sleek-headed men and such as sleep o'nights."

So of the drones; saving certain natural functions, it is all "Buzz," with them. They are an idle, cowardly, inactive, lazy and clumsy set of fellows, and it is well that they are stingless, for it is serious matter of doubt, whether, if they had one, they could get up spunk enough to use it. Their life is a short and merry one, scarcely reaching beyond the brief period of three months, by which time, being of no further use in their *peculiar vocation*, they are all cast out, and killed off by the workers. Behold the picture of the life and death of your lazy, pottle-bellied, ease-loving drones.

> *Their short proboscis sips
> No luscious nectar from the wild thyme's lips;
> From the lime's leaf, no amber-drops they steal,
> Nor bear their grooveless thighs the foodful meal;
> On others' toils in pamper'd leisure thrive,
> The lazy *fathers* of the industrious Hive.

Such being the drones, the Committee dismiss them from

*From an unfinished poem, called "THE BEES," by Dr. Evans, of England.

further consideration, proceeding to the more grateful subject of the

### WORKER BEES.

These constitute the great mass of the population, being, as we have before hinted, unproductive or barren females. By them all the varied labors of the hive are carried forward. They are shorter and less in size than either the queen or the drones. Taking the queen at one inch in length, which is about right, the drone is two-thirds, and the worker one-half an inch in length, The number of working-bees in a healthy hive, may be safely put at from twelve thousand to twenty or thirty thousand. And in non-swarming hives, (such as have been in successful use by the writer, to which further reference will be made,) there have been, beyond question, as many as forty-five thousand to fifty thousand. When in such numbers, and carefully attended to, in the matters of ROOM and VENTILATION, the united labors of so numerous a body of workmen, or rather work-bees, are productive of magnificent mountains of high-piled sweets. The writer once owned a non-swarming hive, which he kept in the garden of Samuel Cook, Esq., of Salem, and which consisted of three collateral boxes. At the end of the second season from its being tenanted by the bees, each side box contained about forty-five pounds of honey. Both these were taken away and there was left in the central box, where the bees domiciled, fifty pounds for their winter use. To return to the workers. They are all provided with a flexible apparatus, called a proboscis, with which they LAP UP the honey, for they are a lapping, not a sucking insect. Shakspeare to the contrary notwithstanding, who says in the Tempest,—

"Where the bee sucks, there suck I."

They also have, upon their thighs, small hollow baskets to receive the farina and propolis which they gather, in great and seemingly unnecessary quantities, from the flowers and the leaves.

Shakspeare, from whom we have already quoted, supplies another thought in this connexion,—

> "The Honey bags steal from the humble bees,
> And, for night Tapers, crop their waxen thighs,
> And light them at the fiery glow-worm's eyes."
>
> *Mid-Summer Night's Dream.*

And again,

> "Like the Bee, tolling from flower to flower,
> The virtuous sweets;
> Our thighs packed with wax, our mouths with honey,
> We bring it to the Hive."—*Henry IV.*

The working-bees have, further, a honey-bag, in shape like a tapering oil-flask. This, when full, is about the size of a small pea. The honey, which it contains, is, in part, delivered up into the honey-cells of the hive, for winter use, in part, goes into the general system of the bee for its nourishment, and a portion is converted into wax, which is afterwards exuded in scales, between the rings of the abdomen. For their personal defence and the defence of their home and hive, and its right precious contents of queen, and young, and honey, they are furnished with a most powerful sting, in the use and application of which they are eminently apt, as your Committee have had pungent experience, and can testify thereto. This sting is complex and two-fold, being a horny scabbard, enclosing two bearded darts, along the groove between which, is ejected a venomous fluid acutely poisonous. This poison is a chemical acid, which may be neutralized and rendered harmless, by the early application of any alkali, such as pearl-ash, or saleratus dissolved in warm water. The bee seldom stings, except about home, and here its watchful jealousy against intruders, keeps it constantly "primed and loaded," and ready for fight. Yet, if they get wonted to the visits of the keeper, or to frequent visitors, they are much less apt to sting, than if left wholly unused to such visits. In fact, if visited frequently, by persons who move about the premises carefully and quietly, and who are cleanly in their habits, and have no peculiarly strong human odor, and who are careful not TO BREATHE UPON THEM, they are, on the whole, a tolerably peaceable and gentlemanly crowd. Never strike at them;

never breathe on them ; never go near them when in, what the refined lady in the "Vicar of Wakefield" called, "A MUCK OF SWEAT." If you do, you will be quite likely to fare as the Greek Poet, jolly old Anacreon, says, Cupid fared ;

Cupid, once among the Roses,
Sees not where a Bee reposes;
But was wounded in the finger,
By the furious little stinger.

*Translated by the Committee from the Original Greek*!!

Just hear what old Butler says, who wrote on Bees more than two hundred years ago : "If thou wilt have the favor of bees that they sting thee not, thou must avoid some things which offend them ; thou must not be unchaste and uncleanly ; for impurity and sluttishness, themselves being most chaste and neat, they utterly abhor ; thou must not come among them smelling of sweat, or having a stinking breath, caused either through eating of leeks, onions or garlick ; thou must not be given to surfeiting or drunkenness ; thou must not come puffing and blowing unto them, neither hastily stir among them, nor resolutely defend thyself when they seem to threaten thee ; but softly moving thy hand before thy face, gently put them by ; and lastly, thou must be no stranger unto them. In a word, THOU MUST BE CHASTE, CLEANLY, SWEET, SOBER, QUIET, AND FAMILIAR, so will they love thee, and know thee from all other." (Butler, Chap. 1. part 33.)

For safety in operating among them, it is prudent, if the Apiarian has any fears, to smoke a pipe or segar. With tobacco smoke you may drive before you "a whole wilderness" of bees. Their detestation of the nauseous weed is truly exemplary.

Your Committee now desire to say a word or two upon bee hives, and in that connection to speak of the management of the bee, and to plead earnestly for a more merciful, as well as more judicious treatment of this most useful insect, than it ordinarily receives.

There are very many excellent bee hives, patented and unpatented. We shall not discuss their various merits, but shall only point out such principles in their general make, as shall

secure the management we desire to see carried out. This management is to have for its distinguishing feature, THE PRESERVATION OF THE BEES FROM THE CRUEL, UNNECESSARY, IMPROVIDENT AND HEARTLESS DESTRUCTION BY SULPHUREOUS FUMES, to which so many farmers and Apiarians doom them, for the sake of getting their honey. Murder and arson, and robbery, all combined! How feelingly Thompson laments this barbarous usage in the "Autumn" of his "Seasons!" (line 1170 et seq.)

> "Ah see, where robb'd and murdered, in that pit
> Lies the still heaving Hive! at evening snatched,
> Beneath the cloud of guilt-concealing night,
> And fix'd o'er sulphur! while, not dreaming ill,
> The happy people, in their waxen cells,
> Sat tending public cares;
> Sudden, the dark oppressive steam ascends,
> And, used to milder scents, the tender race,
> By thousands, tumble from their honied domes!—
> —Into a gulph of blue sulphureous flame."

This destruction, the Committee say, is wholly unnecessary, as well as cruel, and they intend to substantiate the assertion, by showing the bee-keeper, that, if he considers it necessary to dislodge the bees from a hive that he may take the honey, *there is provided by nature, a means of doing it, without destroying the life of a single bee.* The means referred to will be discussed before closing the report.

We have already spoken in terms of praise, of the one empty hive, presented at the Fair of our Society. This was very thoroughly made, of excellent and well seasoned one-and-a-half-inch stock. And this thickness is the least that should ever be used in making a hive.

It was provided with a movable bottom-board, and two collateral boxes. And here are just the elements that your Committee wish to see introduced into every hive. Mr. Kendall, the maker, is certainly laboring in the right direction and in a good cause. The elements, we say, are in this hive, for a properly designed and well made hive should have a movable bottom-board, collateral boxes, and an upper chamber in addition. With such a hive, and we will give more minute details directly, bees may be successfully kept, and made to yield

a handsome profit to the keeper, from the sale of their superfluous honey. Not a life need be sacrificed, and the honey taken will be considered but a fair rentage paid by the bees for the use of a comfortable home and hive, a home and hive in which, from its proper constructiou, they are equally protected from the excessive heat of summer, (and therefore can work the better, and without idlers piled upon the outside,) and from the severe cold and varying temperature of winter. They will also, by means of the chamber, be kept free from that dampness and mould, which, during the winter, causes the destruction of so many stocks. With such a hive, the Apiarian may permit or prevent swarming, just as he pleases.

We will now give the description and dimensions of a hive, constructed with the above principles in view. Such a hive was successfully used by the writer for very many years, in the City of Salem. It is not patented, and no hive ever should be, and the Committee are glad to know, that the granting of patents on hives will meet very little encouragement at the Patent Office in Washington. It is not wholly an original hive, but its several points have been made up by careful examination of the descriptions of the best hives known here and in England, by actual practice with a great variety of hives, and by diligent study of what appeared to be capable of meeting the wants and suiting the habits of the dwellers and workers in hives. Any hive is a good one which is constructed on the principle of humanity to the honey bee, and your Committee speak of this, not with the intention of saying, that it is "the best that was ever made," to use a common phrase, but simply to say that it is a good one, and will answer a satisfactory purpose ; that it is not complicated nor costly, and can be easily managed. They say to the bee-keepers of the County, "*save your bees, by using such hives, as will enable you to do so, and at the same time, give you a fair percentage of their labor.*"

Many such hives are in use in our county. Mr. Perley King, of Danvers, Mr. Bodwell, of Lawrence, Rev. G. B. Perry, of Groveland, and very many others, whose names do not occur to us, use such hives, and we wish their use was universal.

The hive we propose to describe consists of four parts, viz :

a bottom board, a centre hive, and two collateral boxes. These will be described separately. The stuff of which all the parts are made, is to be of the best stock, well seasoned and free from knots and from shakes. The *thickness* of the stock mentioned, is, in all cases, what it is after being planed down, and smoothed off and ready for use, and the other dimensions are all *inside measure*. We may as well mention here, that it is intended that these hives should be placed under some convenient kind of house, (open to the South,) and sheltered from the sun and the storm.

1st. The bottom board is made of one-and-a-half inch stuff, and is bevelled at its front edge, so that the upper side, on which the hive rests, is fourteen and one half inches wide, and the bottom, is fifteen and one half inches wide. The object of the bevel is, that the rain which may beat against the front of the hive, may easily run off. The length of the bottom board is thirty-one inches, inclusive of a stout cleet at each end, to prevent warping. In the front centre of it, is the door-way for the bees to enter and leave, six inches long, and three eighths of an inch high. This commences at the lower front bevel edge of the bottom board, and slanting upwards and inwards, opens out into the hive, just within the *inside* of the front board of the hive. This *inner* opening of the door-way is made rather full and spreading, so as to give room for the bees entering with their loads, to separate easily in the several directions into which they may happen to take their supplies. It is made small at the outside, so that the bees may the more readily be able to defend themselves against their enemies.

2d. The central and main hive is twelve inches by twelve inches, in area, and is twenty inches high, reckoning from the upper side of the bottom board on which it rests, to the underside of the top cover, which top cover made of seven-eighths stuff, is just so much larger than the central hive as to allow a projection three quarters of an inch all round. This top must be firmly nailed on, driving the nails a little slanting, to get a better hold. The twenty inches height of this central hive, is divided into two rooms, by a seven-eighths piece of stuff, through which six holes, one inch bore, are made, to lead

from the lower to the upper room, and over which holes,* large pint tumblers or boxes may be placed for the bees to build in. What they may here deposit, you may take for rent, any time when full. The upper room is nine, and the lower room is ten and one eighth inches high. The inside and roof of this lower room must *not be planed too smoothly*. A little roughness assists the bees in securing their comb. Do not put any sticks across this room, they will be in the way, if you should at any time, wish to take out old comb, to let the bees replace it with new, and they are of no use whatever. The back and front boards of this central hive are one and one half inches thick, and have in them, openings, six inches by four, and glazed, looking into the *lower* room, to give the keeper a chance to see what is going on. These are to have covers closely fitted in. The back board reaches only to within *a quarter of an inch* of the *upper* side of the partition board which is between the lower and upper rooms, this upper side being, of course, the floor of the chamber. This falling short leaves a rabbet against which the back door of the chamber, *which is one and one half inches thick, and is made of the full size of the chamber*, may rest. The sides of the central hive are of seven-eighths stuff, twelve inches wide, and twenty inches high. In these sides are cut slits, or passage ways for the bees, through which they pass from the central to the side boxes, to be described directly. These slits are cut, one out of the bottom of the side-piece, one at nine and one half inches from the bottom, and one just half way between these two. They are seven inches long and five eighths inch high. By this arrangement, it will be seen that the top of the upper slit of the three, is just even with the top of the central hive. Out of the inner back edge of those parts of these side pieces, which make the sides of the chamber, rabbets are also cut for the purpose of supporting the back door above spoken of. A door may also be cut, if you choose, out of the upper part of the front side of the central hive, to enable you to examine and

*Keep these holes open in winter, and tumblers over them to collect the steamy moisture, which, rising from the bodies of the bees, often proves destructive to the stock.

take out the front glasses, without disturbing those in the rear. If this be cut, rabbets must be left to support the door.

3d and 4th. The collateral or side boxes, are each ten and one eighth inches high, six and a half wide, and eleven inches from front to rear, made of seven-eighths stuff. The side that is next the central hive, projects one half inch to the front and the same to the rear, coming flush with the front and rear of the central hive, and so giving space for the reception of screws by which to secure it to the central hive. Cleets on the bottom board, placed in front of these side boxes, where they fall back from the bevel-edge, keep the whole hive firmly in place. Through this same side, slits or openings are cut to correspond with those already cut in the central hive. Let the inside of these boxes be only *tolerably smooth.* Out of the front and rear, cut holes four by four inches, and glaze them, through which to see what is going on. There must, of course be proper covers for these holes. These and all other openings *must be kept shut*, excepting when you may wish to take a look, as bees prefer to work in the dark. The top cover of the side box is to project on each side, excepting where it joins the central hive, and here it is to be flush. Through the centre of this cover, cut a hole four by four inches, and sink down into it, flush with the top, a piece of tin or zinc, *perforated abundantly with small and smooth holes.* Over this, have a slide cover, to open and shut at pleasure. This tin is to let out the hot air from the side boxes, and consequently, from the central hive, and to prevent the bees, by this ventilation, from clustering and idling on the outside, and to control their swarming. With proper ventilation and the giving of room enough to work in, you may prevent your bees from swarming, and keep all hands constantly, and therefore profitably at work, and this is *a most important feature in bee management. Do not by any means neglect it.*

These perforated tins should be kept open, during the great working season, say from the middle of May to the middle of July, and if the bees fill them up, be sure to open them out again, by carefully inserting an awl or stout needle.

During the first season in which a swarm is put into this hive,

it be must confined to the lower room of the central part. If the season is so favorable, that they fill this room completely, they may be allowed to go up into the tumblers or boxes, in the upper room, or into one of the side boxes. To command the passage holes leading to the tumblers, strips of tin must be procured, say two inches wide and twelve inches long, turned up a little at one end, so as to give hold in drawing them out. When shut over the holes small tacks will hold them, and *they must be shut when you are getting your swarm in*, or the bees will go into the upper room and cause trouble. The lower room is the principal home. To command the slits, or passages into the side boxes, a sheet of tin, of proper size, is the most convenient. When the second season opens, the bees may be allowed full admission to both side-boxes and to all the tumblers. Spare bits of honey-comb put into the latter, will be very useful, as an inducement to the bees to commence working in them. These tumblers, when full, may be taken off at any time. Hold them mouth upwards, and the bees will soon leave, and you may feast upon the fresh honey at your own table, or send it as a comfort to a sick or needy neighbor. As to the side-boxes when full, the writer has always preferred to let them remain, till some cold morning in October, when it will be found that the bees will be all clustered into the central hive for warmth, and you may quietly unscrew the side one, and take it away. No bee will be there. How vastly preferable is this management to murderous assault by fire and fagots, and sulphureous fumes of choking brimstone!

Your hives should be all made up and most thoroughly painted, and the paint well dried, some weeks before needing them for swarms. It will be well to keep a swarming hive or two, wherewith to stock your "*non-swarmer-hives*, such as are described above. We apply no such laudatory phrases, as "best," "most perfect," "surest," "incomparably superior," to this hive. We merely say it has always done good service. There may be, there probably are, better ones. Show them to us and *we'll try 'em*. As old Horace said:

"Si quid novisti rectius istis,
Candidus imperti; si non, his utere mecum."

That is——"If aught you know that better is than this,
Frankly avow it; but if not, use what we show to you."

We will now point out the means by which the bee-keeper may stupify his bees, without killing or hurting them; how he may, while they are thus stupified, transfer them all from their own hive, leaving him the honey, and unite them to another stock, with which they will pass the winter, and by the opening of the spring give the owner a strong, and vigorous colony, which will either throw off strong and vigorous swarms, or if the bee-keeper prefers, will keep at work in the thus doubled hive, and greatly increase the make of honey. It must be borne in mind that the hive we have recommended and described, is, *if the bee-keeper choose so to manage it, a non-swarming hive*, though he may let it swarm or not swarm, at his pleasure.

There grows in the old damp meadows, horse pastures and in other localities all about the farms, a sort of mushroom, varying in size from a human head to a Shanghae's egg, which is variously called Puck, Puff ball, Frogcheese, and Fungus, and by Naturalists, Fungus Maximus, or Pulverulentus, and Bovista Lycoperdon. The fumes of this, after it has been dried, are narcotic, and will so stupify the bees, that they will tumble down from out of the hive, and remain dormant from one to two hours, during which time, they may be handled with entire impunity.

An old English bee-master, John Thorley, who wrote in 1774, after, as he says, "forty years' experience," thus describes the preparation of the Fungus for use: "When you have procured one of these Pucks, put it into a large paper, pressing it down therein to two thirds or one half its bulk, tying it up very close. Put it into an oven, some time after the household bread is drawn, letting it continue all night. When it will hold fire, it is fit for use." For the purpose of fumigating the bees, and stupifying them, a small sheet-iron box must be procured, in size between a pepper-box and a flour-dredging box, and having a cover to fit on rather tight.* From one end of this there should extend a tube, about eight inches long, and one half inch bore, bent upwards at its upper end, so as to be inserted into the door of the hive; and from the other end, another tube about six inches long, and of such size as to fit snugly upon the nose of a common bellows. Having the

*Brown's patent Fumigator is excellent for this purpose.

box and the bellows all ready, cut off a piece of the Fungus about as large as a hen's egg, put it into the little box, set it on fire, shut the box, and put the six inch end upon the nose of your bellows, insert the curved end of the other tube into the door of the hive, shut all other openings, if there be any in the hive, and blow away !

Blow, bellows, blow,
For you must know,
That all this smoke,
The bees will choke;—[*Old Song.*]

—almost choke, not quite, for it is only a brief intoxication, which will do no harm. In a few minutes, after a buzz or two, you will hear the bees come toddling down, like drops of hail, and they will lie upon the bottom board of the hive, as harmless as "sucking doves." Give the hive a few gentle taps on its top and sides, to shake them all down and remove it, stripped of its bees, away from the place of your operations. Take it to the house or barn, and put it into a dark room, where robber-bees cannot get at it. Now, after sprinkling your tipsy bees, with a very little honey, take another stock and put it over them. Fumigate this second hive, though not quite so much as the first, and leave it, after closely wrapping it round with wet cloths, to keep *out* all outsiders, and to keep *in* all insiders. By the next morning, you will find a *coalition* formed, and the two parties getting along quite comfortably. Keep them confined, *though not wholly without air*, all the next day, and at evening of the second day, take off the coverings and open the door of the hive. The bees may rush out, but will soon return and all will be quiet. As to which queen shall be retained to be the mother for the long-term, give yourself no trouble, the coalition will settle that knotty question for themselves. It will be best for the operator to have an assistant, and the whole success will depend upon expertness, coolness and fearlessness. If you cannot procure the Fungus, take common blotting-paper and dip it into a solution of nitre, (a tea-spoon full to a pint of water,) and after saturation, dry it by a fire. The fungus has often and successfully been used

by the writer, the solution of nitre is given on the authority of others.

The united bees will get through the winter better than a single stock. In fact, Gelieu, a French Apiarian, carried the uniting of stocks to the extent of joining four stocks to a fifth, and the united stocks consumed but little more honey than an ordinary single stock! By this method you save your bees and at the same time get the honey. You may strengthen a feeble stock, or if your neighbor wants to "take up his bees," to get honey *in the old way*, persuade him to let you "take them up," *in this new way*, restore to him his hives and the honey in them, and join the bees to your own stocks, all, of course, with his leave! Is not this better than "fire and brimstone!"

The writer has usually employed a box of the size of the hives, and four inches deep, to catch the dropping bees. This box had a hole, two or three inches square, cut into each side. Into two opposite ones, he put a piece of glass that he might see what was going on, and into the other two opposite ones, a piece of tin, perforated with small holes to admit air after fumigation. These last must, of course, be stopped, while the smoke is being blown in. *This operation must be performed just at night, when the bees are all at home, and at some time between the middle of August and the middle of September.*

On reference to the Transactions of the Agricultural Societies of the Commonwealth, for the year 1850, it will be seen that the principles and practice here advocated, find other advocating in the statements of Mr. Abraham Lord, of Ipswich, and Mr. I. F. Kimball, of Boxford. Both of these gentlemen, exhibit in their statements, gentle feelings, as well as skill, in the management of their bees. To the farmers of the County, we say,—"Do not omit to keep bees, and to keep them in the right way. That way includes indispensably the great element of HUMANITY, and this humanity is the very best policy."

We add a few words respecting the enemies of bees. The mouse, the toad, the ant, the stouter spiders, the wasp, the

death-head moth, (Sphinx Atropos,) and all the varieties of gallinaceous birds, have, each and all, "a sweet tooth," and like, very well, a dinner of raw bee. But the ravages of all these are but a baby-bite to the destruction caused by the bee-moth, (Tinea Mellonella.) These nimble-footed little mischievous vermin, may be seen, on any evening, from early May to October, fluttering about the Apiary, or running about the hives, at a speed to outstrip the swiftest bee, and endeavoring to effect an entrance into the door way, for it is within the hive that their instinct teaches them they must deposit their eggs. You can hardly find them by day, for they are cunning and secrete themselves. "They love darkness rather than light, because their deeds are evil." They are a paltry-looking, insignificant little grey-haired pestilent race of wax-and honey-eating and bee-destroying rascals, that have baffled all contrivances that ingenuity has devised to conquer or destroy them.

Your Committee would be very glad indeed to be able to suggest any effectual means, by which to assist the honey bee and its friends, against the inroads of this, its bitterest and most successful foe, whose desolating ravages are more lamented and more despondingly referred to, than those of any other enemy. Various contrivances have been announced, but none have proved efficacious to any full extent, and we are compelled to say that there really is no security, except in a very full, healthy and vigorous stock of bees, and in a very close and well made hive, the door of which is of such dimensions of length and height, that the nightly guards can effectually protect it. Not too long a door, nor too high. If too long, the bees cannot easily guard it, and if too high, the moth will get in over the heads of the guards. If the guards catch one of them his life is not worth insuring. But if the moths, in any numbers, effect a lodgment in the hive, then the hive is not worth insuring. They immediately commence laying their eggs, from which comes, in a few days, a brownish white caterpillar, which encloses itself, all but its head, in a silken cocoon. This head, covered with an impenetrable coat of scaly mail, which bids defiance to the bees, is thrust forward, just outside of the silken inclosure, and the gluttonous pest eats all before it, wax,

pollen and exuviæ, until ruin to the stock is inevitable. As says the Prophet Joel, "the land is as the garden of Eden before them, and behind them, a desolate wilderness." Look out brethren bee-lovers, and have your hives of the best unshaky, unknotty stock, with close-fitting joints, and well covered with three or four coats of paint. He who shall be successful in devising the means of ridding the bee-world of this destructive and merciless pest, will richly deserve to be crowned KING-BEE, in perpetuity, to be entitled to a never-fading wreath of budding honey-flowers from sweetly-breathing fields, all murmuring with bees, to be privileged to use, during his natural life, "night tapers from their waxen thighs," best wax candles, (two to the pound !) to have an annual offering from every bee master, of ten pounds each, of very best virgin-honey, and to a body-guard, for protection against all foes, of thrice ten thousand workers, all armed and equipped, as Nature's law directs. Who shall have these high honors ?

Your Committee have extended this Report to a length perhaps too great. They allege their excuse, in a slight change of Goldsmith's couplet in the "Deserted Village"—

> Brief should we be, "but if prolonged in ought,
> The love we bear to BEES is all the fault."

They have left a great deal unsaid, which they would be glad to have said, and which the subject would, most copiously, have furnished.

In one of Charles Dickens's admirable stories, "Oliver Twist", there is a pleasant little picture, under which is writtten

> "Oliver asking for more !"

If the bee-keepers of Essex should copy his example, your Committee will be most happy to do what they can to respond to the call, and hope not to send them away as little satisfied, as was poor little Oliver Twist !

The subject is full of beauty, full of interest, full of poetry, full of healthful moral associations. We dearly love what the old Greek Philospher called "the bee of the Godlike race." Many a pleasant hour have we profitably passed in their

most pleasant company, so that a facetious neighbor once said of us,

"See him down upon his knees,
Peeping at his honey-bees!"

How often, on a sultry sunny day, have we stood close in front of the door way of the hive, watching the comers and goers, and the busy multitude as they thronged in, with their heavy loads from the fields, and thronged out, to seek for other booty! How often have we been covered with them, "all about the head and shoulders," all redolent as they were with sweets, just coming home to "the tent royal of their emperor," with pillage "from out of summer velvet buds," and "with golden treasures on their little thighs," "small among the *fowls*, yet with fruit passing in sweetness." (Ecclesiastes, XI. 3. Translation of 1650.) Harmless and grateful and liberal in gifts, if well treated and gently handled, we thank you, O Bees, for many useful lessons, for much profitable and pleasant recreation, for a very abstemious application upon us, personally, of your *acute powers of penetration*, and for many a largesse of your richest and sweetest supplies. Earnestly do we commend you,

"Nimble yellow bees, that bring soft blooming spring,
Whom the love of budding flowers is ever maddening,"—
(*From the Greek of Nicias the Physician.*)

we commend you to the favor and protection of the wise and good and thoughtful, who may be confirmed in all their goodness, by your wise example; and to the unwise and the evil, and the careless, who may learn from you, lessons of industry, of economy, of forethought, of love of home and of young, of attachment to law and order, and of instinctive obedience to those well-established principles of government, that constitute the peace and security of society, that so, by your influence, they may become wiser, and better, and happier.

For the Committee,

HENRY K. OLIVER, CHAIRMAN.

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## MOODY ORDWAY'S STATEMENT.

The hive of bees which I present for inspection, is a speci-

men of fifteen hives in my Apiary. The construction and dimension of this hive, I consider superior to any that I have ever seen, and are as follows: Length on the back side two feet, front two feet three inches. This slant on the bottom enables the bee to drag out all dead bees, and filth easily. Width eleven inches and a half, (this width I choose on account of my glass, I buy ten by twelve, and cut it in the middle which answers for half hives,) breadth one foot two inches; these dimensions are in the clear, seven inches and a half from the top, it is separated for the top box, under this is a little shelf, four inches deep and four inches wide, for two small boxes which hold about two pounds each; these are very handy and convenient, in case you want to draw a small quantity for a sick friend, or for a luxury. Under this shelf, is a glass five inches wide, which looks into the body of the hive. The bottom is put on with butts on one side, and with small wire hasps on the other, and a two inch wood screw in the centre behind. In the centre of the hive, I have a piece four inches wide, half an inch thick, firmly secured to the centre piece, running down within the reach of the bees, at the bottom, for a direct communication with the upper box, and stay to the comb, which I find is all that is necessary.

There are two passages to the large box, one four inches long and half an inch wide; the other two and one half inches square, next to the back shelf. These holes should be in the centre, and on a line, that the communication may be cut off with one piece of zinc or tin. The holes into the small boxes should be two inches square. On the back part of the hive there are two doors, one hung at the top, and the other at the bottom, and both secured with one button in the middle. My hives and boxes are all made of uniform size, so that any box will suit any hive. The boxes are fixed with glass in front, slipped in a groove, cut on each side, so that I can ascertain the amount of honey, and the condition of my bees, at any time. On each side of the hive, (at the bottom of the lower door behind,) are pieces firmly nailed to the hive, one and a half inches wide, and half an inch thick, projecting out four inches before and behind, which answers for handles to carry them by,

and by which they are suspended. At the entrance in front is a slide door made of zinc, and perforated with holes which I can shut at any time, and is very convenient in many instances. My hives are suspended by stout wire, (No. 7, I think,) fixed to the handles before mentioned, and running through a groove in the top of the hive, (the top projecting out a little all round, except behind,) and hitched to staples in rails about five feet from the ground, the top of the hive five or six inches from the rails. Over this stand is thrown a shed, (which has no connection with it,) boarded to the ground on the back (north west) side, but far enough from the hives, for a passage between. Hives about one foot apart on the stand.

I have been thus particular with regard to my hives and stand, for this reason, I have been very successful for six years, and I can attribute it to no other cause than a "good rig." I think very much of this mode of suspending the hives, it is calculated to keep them clear from all vermin, which like bees much better than they like them.

I have had seven new swarms this year, and have taken from nine swarms two hundred and eighty-five pounds of honey, reckoning thirty pounds in the hive which you see,

My mode of management when they swarm, is to let them alight, cut off the limb, put them on a table, or board, set the hive on them, put a quilt over them, and leave them to go up themselves, and I never have lost a swarm when I have done so. I have tried to "manage" a little with bees, but with little or no success. I think the best way is to look to them often, keep them clean as possible, and let them "manage" for themselves.

With regard to the moth, I am inclined to think there is no possible way to keep them clear from the bees ; I am troubled however, but very little with them.

West Newbury, Sept. 24th, 1851.

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ELDRED S. PARKER'S STATEMENT.

I offer this honey, two boxes, for premium. I purchased a swarm of bees of Rev. Dr. Perry, the 20th of June, and hived

them that evening in one of Breck's patent hives. They went to work immediately, and in a fortnight had filled the lower part of the hive. Then I let them into the upper boxes, which they filled so that I removed them the 31st of July, replacing with others of the same size, the boxes which I present for your inspection, weigh each twelve pounds. The hive is placed in a chamber over a wood house. It is now full of honey, forty pounds or upwards. This is my first attempt at keeping bees.

I sowed a small piece of buckwheat for them, this fall, but they have lived principally upon the white honey-suckle, of which there has been a great quantity the past summer.

Groveland, Sept. 23, 1851.

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## ON MILCH COWS.

The Committee on Milch Cows, Report, that they have examined eleven cows, which were entered for premium, and award the first premium of $10 to John H. Dunnels, of Ipswich. The second premium of $8 to Volney C. Stow, of Salem. Third premium of $8 to Joseph P. Pond, of Salem. Fourth premium of $7 to Josiah Crosby, of Andover.

Respectfully submitted,

T. E. PAYSON, CHAIRMAN.

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### JOHN H. DUNNELS'S STATEMENT.

I offer for premium, my cow, of native breed, eight years old. She calved on the 12th day of July last, and the calf was taken from her on the 15th day of August. She has been kept during the past season, on nothing but road feed, four hours each day, with the exception of one pint of meal each morning and evening.

I have kept a daily account of her milk ever since her calf was taken from her, being forty days.

The whole amonnt of her milk during that time was 1526¼ pounds. Average per day during said time thirty-six pounds.

Ipswich, Sept. 24th, 1851.

JOSEPH P. POND'S STATEMENT.

The cow offered for premium by me, is of native breed, nine years old, and calved the 18th of August, 1850. She was bought by her present owner October 7th, of that year; since which time, viz: two hundred and fifty-three days euding this day, and commencing fifty days after calving, when she was bought, she has given 9,281½ lbs. or 26$\frac{10}{15}$ lbs. per day average, or 10½ quarts per day, (at 2½ lbs. per qt.) average.

Her feed as been common dry hay in winter, with meal and shorts twice each day, and in summer, she has been kept in the Town Pasture, (so called,) where feed has been so short that I have been obliged to feed as in winter, with meal and shorts twice each day.

Salem, Sept. 25, 1851.

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JOSIAH CROSBY'S STATEMENT.

I offer for premium, my Ayrshire Cow, seven years old. She calved in April last. During the month of June, she gave upon an average, fifteen quarts of milk per day, and in a few instances she gave eighteen quarts per day. She made in seven days of that time, ten pouuds of butter.

She has run in a good pasture, but has had no extra feed of any kind. She generally holds out till within a few days of calving.

North Andover, Sept. 25, 1851.

**Dr.** **William Sutton, Treasurer, in account with the Essex Agricultural Society.** **Cr.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1850. | | | | 1850. | | | |
| Sept. 28. | To balance former account, | | $559 91 | Nov. 15. | By amount of Premiums and Gratuities, awarded by the Trustees, | | $740 87 |
| Oct. | To Bank Dividends, | | 238 24 | | By amount paid on account of Colman Library, | | 84 13 |
| Oct. 11. | To State Bounty, | | 600 00 | | By Expenses, as follows: | | |
| 1851. | | | | | Of Exhibition of 1850, | 421 08 | |
| April | To Bank Dividends, | | 247 74 | | Printing, | 296 40 | |
| Sept. | To Amount new members, | | 165 00 | | Keeping State Society's bull, | 73 52 | |
| | To nett receipts of Franklin Hall Exhibition, | | 62 70 | | Secretary's salary, | 75 00 | |
| | To nett receipts of Horticultural So. Exhibition, | | 45 86 | | Contribution to Association of Agricultural Societies in Boston, | 15 00 | |
| | To premiums unclaimed, | | 31 00 | | Postages, | 21 25 | |
| | | | $1,950 45 | | | | — 902 25 |
| | | | | | By balance of Cash on hand, | | 223 20 |
| | | | | | | | $1,950 45 |

## FUNDS OF THE SOCIETY.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 16 | Shares in the Warren Bank, cost | | 1,596 00 | | Notes Receivable, | | 1,318 59 |
| 12 | " " Exchange Bank, par | | 800 00 | | Cash on hand, as above, | | 223 29 |
| 22 | " " Commercial " cost | | 1,471 66 | | | | $8,380 70 |
| 7 | " " Mercantile " par | | 700 00 | | | | |
| 6 | " " Merchants " par | | 300 00 | | Funds in 1850, | | 8,817 41 |
| 5 | " " Village " par | | 500 00 | | Funds in 1851, | | 8,380 70 |
| 3 | " " Salem " par | | 300 00 | | | | |
| 12 | " " Danvers " cost | | 1,171 25 | | Less, | | 336 71 |

SALEM, September 26th, 1851. E. E. WILLIAM SUTTON, TREASURER.

Salem Dec. 22, 1851. We certify that the foregoing account has been examined by us, and found to be correctly stated and vouched.

R. S. DANIELS, }
N. J. LORD. } AUDITORS.

# OFFICERS OF THE SOCIETY.

CHOSEN SEPTEMBER 25, 1851.

JOHN W. PROCTOR, of Danvers, *President.*
DANIEL ADAMS, Newbury,
BENJAMIN PORTER, Danvers,
ELISHA MACK, Salem,
JOSIAH LITTLE, Newburyport. } *Vice Presidents.*
WILLIAM SUTTON, Salem, *Treasurer.*
ALLEN W. DODGE, Hamilton, *Secretary.*

## HONORARY TRUSTEES.

| | | | |
|---|---|---|---|
| Frederick Howes, | Salem. | James H. Duncan, | Haverhill. |
| Ebenezer Mosely, | Newburyport. | Gardner B. Perry, | Groveland. |

## TRUSTEES.

| | | | |
|---|---|---|---|
| Lewis Allen, | Danvers. | Moses Newell, | West Newbury. |
| John Alley, 3d. | Lynn. | Josiah Newhall, | Lynnfield. |
| Moses L. Atkinson, | Lawrence. | Andrew Nichols, | Danvers. |
| Jacob Brown, | Ipswich. | William Osborn, | Lynn. |
| David S. Caldwell, | Newbury. | Thomas E. Payson, | Rowley. |
| David Choate, | Essex. | William F. Porter, | Bradford. |
| Jeremiah Coleman, | Newburyport. | William R. Putnam, | Danvers. |
| Andrew Dodge, | Wenham. | Dean Robinson, | West Newbury. |
| Joseph How, | Methuen. | Richard S. Rogers, | Salem. |
| John M. Ives, | Middleton. | James Stevens, | Andover. |
| Joseph Kittredge, | Andover. | John Stone, Jr., | Marblehead. |
| John Keely, jr. | Haverhill. | Horace Ware, Jr., | Salem. |
| Royal A. Merriam, | Topsfield. | Richard P. Waters, | Beverly. |
| Wingate Merrill, | Danvers. | Enoch Wood, | Boxford. |

## MEMBERS ADMITTED IN 1851.

| | | | |
|---|---|---|---|
| William C. Brinney, | Salisbury. | J. C. Perkins, | Salem. |
| Hazen Bodwell, | Methuen. | J. B. Phillips, | Lynn. |
| Joseph R. Bodwell, | " | Amos Poor, Jr. | West Newbury. |
| Ephraim Brown, | Marblehead. | Moses H. Poor, | " " |
| Edward M. Burleigh, | Newbury. | William F. Porter, | Bradford. |
| Daniel Buxton, Jr., | Danvers. | Daniel Potter, | Salem. |
| George H. Carr, | West Newbury. | Rufus Putnam, | " |
| William Chase, | Salem. | Samuel Raymond, | Andover. |
| Ezra Dodge, | Wenham. | Frederick Robinson, | Marblehead. |
| John H. Dunnels, | Ipswich. | J. A. Robinson, | Salem. |
| Samuel P. Fowler, | Danvers. | Calvin Rogers, | West Newbury. |
| Wm. P. Goodhue, | Salem. | Charles Rogers, | " " |
| Joshua Hale, | Newburyport. | Hiram Rogers, | " " |
| John Hobbs, | Ipswich. | Samuel Rogers, | " " |
| John L. Hubbard, | Newbury. | Ebenezer Row, | Rockport. |
| Philip Jones, | Amesbury. | Thomas B. Spofford, | Georgetown. |
| Edwin Mudge, | Danvers, | Aaron Wallis, | Ipswich. |
| Hanson Ordway, | West Newbury. | J. F. Winkley, | Amesbury. |
| Thomas J. Ordway, | " " | | |

# LIST OF PREMIUMS & GRATUITIES.

## AWARDED IN 1851.

### PLOUGHING—DOUBLE TEAMS.

David S. Caldwell, Newbury, first premium, - $10 00
Nathan Tapley, Danvers, second premium, - - 8 00
John L. Hubhard, Newbury, third premium, - - 6 00
John Washburn, Lynn, fourth premium, - - - 5 00
Jacob Farnham, Andover, fifth premium, - - - 4 00

### PLOUGHING—SINGLE TEAMS.

Mary Putnam, Danvers, first premium, - - - 8 00
Franklin Alley, Marblehead, second premium, - - 6 00
Nathan Tapley, Danvers, third premium, - - - 4 00
Moses Pettingill, Topsfield, fourth, - - - - 2 00

### FAT CATTLE.

George Norton, Essex, second premium, - - - 8 00
Jedediah H. Barker, Andover, third premium, - - 5 00

### WORKING OXEN.

Jonathan Berry, Middleton, first premium, - - - 10 00
Elijah Pope, Danvers, second premium, - - - 8 00
John L. Hubbard, Newbury, third premium, - - 6 00
Jedediah H. Barker, Andover, fourth premium, - 4 00

### STEERS—TWO YEARS OLD.

David S. Caldwell, Newbury, first premium, - - 6 00

### BULLS.

Joseph Kittredge, Andover, first premium, - - - 7 00
Joseph Henfield, Lynnfield, second premium, - - 6 00
John Stone, Jr., Marblehead, third premium, - - 5 00
Jedediah Farnham, Andover, gratuity, - - - 2 00

### MILCH COWS.

John H. Dunnels, Ipswich, first premium, - - - 10 00
Volney C. Stow, Salem, second premium, - - 9 00

Joseph P. Pond, Salem, third premium, - - - 8 00
Josiah Crosby, Andover, fourth premium, - - 7 00

HEIFERS—IN MILK.

Josiah Crosby, Andover, second premium, - - - 6 00
James P. King, Danvers, gratuity, - - - - 5 00

HEIFERS—TWO YEARS OLD.

Nathaniel Kelly, Salem, first premium, - - - 5 00
I. Osgood Loring, Andover, second premium, - - 4 00
I. Osgood Loring, Andover, third premium, - - 3 00

YEARLING HEIFERS.

Isaac Prince, Beverly, first premium, - - - - 4 00
Warren Trask, Danvers, second premium, - - 3 00
David S. Caldwell, Newbury, third premium, - - 2 00
Joseph Kittredge, Andover, gratuity, - - - 2 00

STALLION.

J. B. Phillips, Lynn, premium, - - - - - 10 00

COLTS—FOUR YEARS OLD.

Seth Kimball, Bradford, first premium, - - - 6 00
N. Boardman, Danvers, second premium, - - 4 00

COLTS—THREE YEARS OLD.

Samuel C. Pitman, Lynn, first premium, - - - 5 00
Richard P. Waters, Beverly, second premium, - 3 00

COLTS—TWO YEARS OLD.

Benjamin F. Jenkins, Andover, first premium, - - 4 00
Josiah Crosby, Andover, second premium, - - 2 00

YEARLING COLTS.

Josiah Crosby, Andover, first premium, - - - 3 00
Jacob Farnham, " second premium, - - 1 00

SWINE.

Benjamin Akerman, Amesbury, boar, first premium, - 5 00
Richard S. Rogers, Salem, boar, second premium - 3 00
Adam Boyd, Essex, breeding sow, first premium, - 5 00
Moses Newell, W. Newbury, litter weaned pigs, 1st prem. 6 00
Adam Boyd, Essex, litter weaned pigs, second premium, 3 00
Wm. H. Balch, best single pigs, first and second prem. 6 00

JUNE BUTTER.

John Preston, Danvers, first premium, - - - 10 00
Jonathan Berry, Middleton, second premium, - - 8 00
Benjamin T. Lane, Danvers, third premium, - - 6 00

SEPTEMBER BUTTER.

Jonathan Berry, Middleton, first premium, - - - 10 00
John Preston, Danvers, second premium, - - 8 00
Benjamin T. Lane, Danvers, third premium, - - 6 00

CHEESE.

Paul P. Pillsbury, Andover, second premium, - - 8 00

MANAGEMENT OF FARMS.

William F. Porter, Bradford, first premium, - - 25 00

RECLAIMED MEADOWS.

Samuel Kimball, Boxford, first premium, - - - 15 00
Horace Ware, 2d, Salem, second premium, - - 10 00

GRAIN CROPS.

Benjamin Rogers, Andover, premium, - - - 6 00
Ephraim Brown, Marblehead, premium, - - - 6 00
Adino Page, Danvers, premium, - - - - 6 00
Paul P. Pillsbury, Andover, premium, - - - 6 00

ROOT CROPS.

Lyman Mason, Beverly, premium, - - - - 6 00
Josiah Titcomb, Newbury, - - - - - 6 00
Richard P. Waters, Beverly, - - - - - 6 00

By the Committee on Bees and Honey, - - 8 00
" " " Poultry, - - - 20 00
" " " Vegetables, - - - 5 00
" " " Flowers, - - - 25 25
" " " Fruit, - - - 33 50
" " " Leather, and Articles therefrom, 21 25
" " " Hosiery, - - - 5 75
" " " Counterpanes, Carpets, and Rugs, 22 25
" " " Metallic and Fancy Articles, 33 00

Total, - - - - - $555 50

Hamilton, January 1852. A. W. DODGE, Sec'y.

☞ The list of premiums will be found in the printed show bills. It is nearly similar to that of former years, and will be furnished to any one, on application to the Secretary.

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## DONATIONS MADE TO THE LIBRARY IN 1851.

Transactions of the N. Y. State Agricultural Society, for 1850, presented by B. P. Johnson, Secretary.

Transactions of the Michigan State Agricultural Society, for 1850, presented by J. C. Holmes, Secretary.

An Address to farmers, printed in Salem, 1796, presented by Andrew Nichols.

Johnston's Agricultural Report on New Brunswick.
Nos. of Plough, Loom, and Anvil, for 1850.
American Agriculturist.
} Presented by the Editors of the Salem Register.

Donations of Agricultural books, especially of old and rare pamphlets, relating to the early agriculture of New England, are respectfully solicited. The Library already contains over six hundred volumes, of valuable works. It is kept at the City Hall, in Salem, and the City Clerk, Joseph Cloutman, acts as Librarian. The books can at any time be taken out by members of the Society, among whom are ranked all ordained clergymen, residing in the County.

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# TRANSACTIONS

OF

# THE ESSEX

# AGRICULTURAL SOCIETY,

FOR

1852.

PUBLISHED BY ORDER OF THE SOCIETY,
DECEMBER, 1852.

SALEM:
Printed at Office of Salem Gazette and Essex Co. Mercury.

# BOOK, JOB, AND FANCY

# PRINTING,

Executed at the Office of the

## "Salem Semi-Weekly Gazette"

—AND—

## "ESSEX COUNTY MERCURY,"

**In the best style and on the most favorable terms.**

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## NO. 191 ESSEX St., SALEM.

Opposite the "Mansion House Hotel."

**JANUARY, 1853.**

3.

# TRANSACTIONS

OF

# THE ESSEX

# AGRICULTURAL SOCIETY,

## FOR 1852.

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PUBLISHED BY ORDER OF THE SOCIETY,
DECEMBER, 1852.

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SALEM:
Printed at Office of Salem Gazette and Essex Co. Mercury.
1852.

# ADDRESS.

## BY HENRY K. OLIVER.

There is a suggestive pictorial representation upon the Diploma which the Essex Agricultural Society confers upon its members. As you look at it, your attention will be first taken by a central group of three figures, one, and the principal of which, is like

> "the native maids,
> Amid the festal sounding shades,"

In Tempe's vale—of whom the poet Collins speaks, in his exquisite Ode on the Passions,

> "Loose are her tresses seen, her zone unbound."

At her feet lie twined clusters of roses and of flowers, of varied and beautiful forms, amid a profusion of rich and luscious fruits. I take her to be the Goddess of Industry—more worthy of worship than any divinity of that multitudinous throng that crowded the mythological heavens of Greek and Roman priesthood. Resting upon her lap, and leaning at her side, are two fresh and healthful children, to whose attentive ears she is imparting practical lessons of her own deep wisdom. She tells them of the true happiness, and of the certain blessings attendant and consequent upon persistent diligence. She points them to the home of the Bee, which is seen at her left, all redolent of sweets from honey-breathing flowers,—that truthful and unvarying example of steadfast industry, that

> — "from the flowers exhausts the fragrant dew;
> With golden treasures loads his little thighs,
> And steers his distant journey thro' the skies."—*Gay.*

Success to her lessons, and long live and be honored the Goddess of Industry!

On the left of this central group stand the Farm-House, the cattle, and the trees, and nearer to the front are piled the rich reaped sheaves, full from the harvest fields of

"Autumn, all in yellow clad,
As tho' he joyéd in his plenteous store,
Laden with fruits that made him laugh, full glad
That he could banish hunger, which before
Had by its gnawings oft him pinched sore."—*Spencer's Faery Queen.*

Amid an ample pile of shovels, hoes and rakes, and various farming gear, sits a well-fed chubby chap, with pen in hand and record-book before him. I take him to be an embryo Recording Secretary of your Society, just busily at work in his vocation;

"The chiel's amang you takin' notes,
And fa'th he'll print 'em."—*Burns.*

Success to Industry, success to the Farm-House, the Farmer and the Farm, and success and long life to the young Secretary,—and may no useful fact ever escape his record.

On the right of the picture and in the back-ground, by the river's side, here truly working its passage to the ocean, stands the home of the Speeder, the Spinning-Frame and the Loom, shadowing forth another field, wherein the industry of New-England has been successfully employed. In the foreground, sits another undressed urchin, who points you, exultingly, to the prize-medal which has rewarded his ingenuity and skill as a manufacturer.

Success to Industry, whether of the Plough or of the Loom.

One object more remains. In the distant view, a gallant ship, with full sail spreading to the breeze, and deeply freighted with the products of the Farm and of the Mill, is ploughing her furrow across the trackless deep, to some far distant port, —conveying the sources of wealth to enrich other climes, and to return with other wealth, in doubled profusion, to enrich her own.

"Upon the gale she stoops her side,
And bounds upon the swelling tide,
As she were dancing home;
The merry seamen laugh to see
Their gallant ship, so lustily,
Furrow the green sea foam."—*Scott's Marmion.*

Success to Industry again,—whether of the Plough, the Loom, or the Ship! And yet, what and where were the Loom and the Ship, without the Plough? Nay, what were either, without the other two? For, as "the eye cannot say unto the hand, I have no need of thee, and as the head cannot say unto the feet, I have no need of you,"—so these triple twins of the great interests of society are linked together in mutual and inseparable necessity of each other. Neither can exist, if sundered from the others, any more than the life of the Siamese twins could be preserved, were you to sever the ligature by which God hath bound them together. And it was with discriminating justice, and with enlarged and liberal views, that this Society, created more expressly for the promotion of Agricultural industry and interests, joined in fitting bands upon its escutcheon, the emblems of these three great industrial pursuits, so long and so successfully carried forward by the people of our County of Essex. May you never forsake, nor forget your device, but

"Forever wear it,
Until it wither with you to the grave,
Or flourish to the height of its degree."—*Shakspeare's Henry VI.*

---

*Farmers of Essex, and Friends:*

At first thought, it would seem that he who addresses farmers, on the great subject of husbandry, should himself possess more agricultural wisdom and skill, than they. The thought is certainly natural enough, and in the practical application of much to which it relates, is unquestionably true. But it is by no means of universal adaptation. A well known English drover, as lank and lean in his body, as he was in his mind, being one day in a Bookseller's shop, in London, where was also present that intellectual giant, Dr. Samuel Johnson, took up a volume of Churchill's Poems, and read off, with pompous utterance, the following line,

"He who rules freemen, should himself be free."

Then turning to the Doctor, with a smile of satisfaction, he cried, "there Sir, what do you think of that?" "I think it

rank nonsense, sir," retorted the other. "It is an assertion without proof, and you might, with as much propriety, say,

"Who drives fat oxen must himself be fat."

This retort, hitting and fitting both the logic and the leanness of the drover, quite silenced him. Yet to me it affords encouragement, for it shows that

Who counsels farmers, need not farm himself.

A man may well understand the theoretical principles upon which the enginery of steam is constructed, and he may know, to great precision, the shape, the size, and the place wherein should be put all the several pieces and parts, that make up the shrieking iron steed that thunders over your rails, and yet have never put these parts together, nor have set the engine in operation,—and he may yet be fully competent to give such hints and instructions to the mere practical machinist, as will enable the latter to elaborate and turn out a more powerful, more enduring, a cheaper and a better machine.

A man may have a very exact and even extensive knowledge of music, and nevertheless be unable to "sound the loud timbrel," to "strike the trembling lyre," to "breathe the dulcet flute," to "make the organ's solemn soothing sounds," or to give any "touches of sweet harmony," either by sound of voice or play of instrument; and yet he shall be able to make such suggestions to the mere practical and mere mechanical musician, that when he takes his flute or hautboy, he shall so "govern these ventages with his fingers and his thumb, and give it breath with his mouth, that it will discourse most excellent music."—*Shakspeare's Hamlet.*

The truth is, the studious mind in the investigation of great principles, brings the most serviceable aid to the exact and practical hand. They are twin sisters, and cannot get along without each other's assistance. They stand in the indispensable necessity to each other of capital and labor, in a union that cannot be sundered, except at the risk,—nay—at the sure destruction of both.

I grant to you all that you will claim of the value of the hand, which word I here use as typical of the practical man,

as I use the word "head," to personate the thinking and devising theorist. Mrs. Hale very justly says,

> "How impotent without the Hand,
> Proud reason's light would shine;
> Invention might her power apply,
> And Genius see the forms of Heaven;
> But vain the will, the soul, the eye,
> Had not the hand been given."—*The Hand and its Work.*

But even here is a distinct recognition of the head—and I have read many a book, the contents of which were prefaced forth as being the practical results of the writer's experiences, and have always found that the writer's head had been his hand's most valuable and reliable, if not his only auxiliary. He had to think before he could act, and he had to reduce his thoughts to exact method, having precise reference to what he designed or desired to do, before he acted. In fact, his head helped him at both ends of his operations. It helped him to methodize what he intended to put into practice, and it helped in putting whatever of wisdom and of value resulted from his practical operations, into such bookly and readable shape, as reaching the eyes, would teach the head, and direct and control the hands of his fellows of the same craft.

There are very many persons, all about us, wise in their own conceit, and wise, too, above what is written, who speak disparagingly of what they call book-learning. But book-learning, in matters derived from experience, is nothing else than the record of the hand-practice of some one man, or of some men, who have employed themselves in a succession of experiments in that art or craft of which the book treats. I say "in matters derived from experience," for while I defend the theorist and the student and their suggestions, and would not be deprived of them in my own business, nor commend to you, farmers, to work and toil on without them, in yours, I am fully aware that genius must offer her theories and her speculations upon the altar of experiment, and that experiment herself must ask the aid of the inventive faculty and its resultant apparatus, from genius, to bring these theories to the test. And that test must not be hurriedly made, and but once for all. It must be a renewed, prolonged, fair, judicious and pa-

tient trial, with a comprehensive and careful observing, during the trial, of all collateral influences and disturbing elements. I have before said, on another occasion, that I am "inclined to the opinion that the exact application of scientific research, accurately tested and brought to bear upon practical details, is at once wisdom and security. And in snch opinion I am greatly strengthened, when I see the wise man, in the solitude of his closet, pointing out by results derived from the disturbances of the heavenly bodies, that exact spot of the remoter heavens, in which the practical Astronomer shall, with his telescope, find another vast globe to be added to the circling worlds that roll about our central sun."—*Report of Adjt. Genl. for year* 1847.

The final result, then, of the theory of the student and the experiment and test of the practical man, made careful record of, booked and published to the world, constitutes a means, than which I can conceive of none other, better calculated to aid the progress of art, in every one of its numerous ramifications. Let such record be carefully made, day by day, and be given to the public for the benefit of associates in kindred employments. Let it contain the results of experimental operations in their several vocations, when experiments without known result, were attempted, as well as the results of known practice in ordinary matters, no longer experimental,—noting such variations as change of time or place, or any collateral disturbance, might cause. If this were done, and done continuously and perseveringly, there would be furnished a mass of information which could not fail to prove of incalculable usefulness. What a copious source would be here created of facts, from which to reason and to theorize towards other facts, as well as to lead to other and further practice!

To the young farmer, especially in the outset of his operations, such records, made by his older and more experienced brethren of the Plough, would prove of double value and interest, and any farmer who can spell and write, and what farmer of New England, blessed as they all are with the presence of a school-house within a stone's toss of every farm-house, cannot do these things, mysteries, indeed, to the transferable

villains of feudal times, (for so were the tillers of the soil then called,) and mysteries to the Russian and Polish serfs who do it now; but, thank God, no mystery to you nor to your children.

Such records, and the recorded inferences and suggestions derived therefrom, would, I suppose, when put into book-form, be called book-learning, and the farmer who should study them, and attempt to practice their teachings, would be called a book-farmer. But pray, why may he not take his information from a printed book, as well as "receive it by tradition from his fathers," as most farmers do, or receive it from a neighbor's mouth. The mouth addresses itself to the ear, and the book to the eye. In the former case, I get the information more quickly, and I lose it more quickly. In the latter case, I get it more slowly, but I retain it the longer, because of that very slowness of acquisition. In the former case, I listen to the teachings, perhaps crude and ill-digested, of a locomotive instructor,—and my informer leaves me to myself, and to the chances of my memory's proving faithless. In the latter, my teacher stays by me,—I can put him into my pocket, or on my shelf, and consult him as my inclination or the necessities of my memory may require.

Daniel, an English poet of the 16th century, whose works are now scarcely read, says on this point,

> "And tho' books, madam, cannot *make* the mind,
> Which we must bring *apt to be set aright;*
> Yet do they rectify it, in that kind,
> And touch it so, that it *turns that way,*
> Where *judgment* lies."

"Yes, they give strength to youth, and joy to old age;—they adorn prosperity, and are the support and consolation of adversity; at home they are delightful, and abroad are no hindrance; at night they sojourn with us as a comfort;—upon our travels they attend us; and in our rural retirement, they do not forsake us!" Thus spake the great Roman Orator, Cicero, and in another place, in the same Oration for his friend, the Poet Archias, he says, "who then shall blame me or be justly angry with me, if those hours which others pass in midnight banquet-

ing, in amusements and in gaming, I employ in the reviewing of my studies."

Let me then commend to you books on farming, and the farming of books. The printed book is more reliable and permanent than the spoken word. The act of preparing a really good book on farming, or upon any other useful art or science, is undoubtedly a slow and laborious process, but it is of immense benefit to him who prepares it,—specially if such literary labor be made a regular business in youth, and so grow into permanent habit afterwards,—and will profit reader after reader, when the hand of the writer shall be palzied in death, and he be sleeping the sleep of the grave.

Now, for my single self, I am not now, I never have been, and I very much fear, (and lament it whilst I fear it,) that I never shall be a farmer, nor a practical or amateur agriculturist, in any way. I have already reached the hill-top, and passed over the summit-level of man's pilgrimage, and as I look upon

> "The down-hill of life, which I find I'm declining,"

as saith the old song,—as I pass towards the time when

> "My way of life,
> Falls into the sere and yellow leaf,
> Which doth accompany old age;"—*Macbeth.*

As I shift into the sixth period of Shakspeare's seven ages,

> "Into the lean and slippered pantaloon,
> With youthful hose well saved, a world too wide
> For my shrunk shanks,—my big manly voice,
> Turning again towards childish treble, that pipes
> And whistles in the sound,"—*As You Like It.*

I can discern, (would that it were otherwise,) in the dim vista that spreads out between my steps and the dark stream that bounds life's narrow day, no broad acres to be called my own, and to be, in the culture and adornment thereof, the solace of life's later years.

It is related by the Historian Livy, that, on a certain occasion, Tarquin, the last King of Rome, sent his two sons, Titus and Aruns, to consult the celebrated oracle at Delphi in Greece. The two young princes took with them, for sport, their cousin Brutus, who, for fear of being put to death by the jealous ty-

rant, as had been his brother and other eminent Romans, pretended idiocy. Each of the young devotees carried gifts to the tutelar god of the prophetic shrine. That of Brutus, was a golden wand, enclosed within a wooden staff, fit emblem of his own great soul, enshrined, for the time, beneath the mean disguise he had assumed. I am by no means sure that this golden gift did not secure to Brutus, both the response of the oracle and its interpretation. To their inquiries at the temple, it was replied, that "he should reign at Rome who should first kiss his mother." The three hurried back to Italy, and while the king's two sons hastened to their royal home to salute their natural mother, Brutus pretending to stumble, fell to the earth and touched it with a kiss, considering her, as he afterwards declared, to be the common mother of mankind.

Now, who of this farming throng ought not so to love this blessed and life-sustaining mother, that he would be willing to kiss her, "from the rising of the sun even unto the going down of the same,"—nay, would even fondle and caress her in his arms, were she a not a little too large for a comfortable hug. But the fondling she asks, and asks but to reward, is of a different sort. She invites her children to thrust the hoe and the shovel, deep down into her bowels, and to drive the plough and the harrow down through her skin, yea, "even unto the dividing asunder of her bones and her marrow," never uttering word of complaint, but on the contrary, inviting to the intensest and deepest scarification, by gifts bounteous in proportion to the thoroughness and pertinacity of the operation. Who can refuse to love such a mother? Who can refuse to confide in her life-giving and affluent bounties? You, farmers, you are her special favorites;

> "You alone cand find
> The dark recesses of her inmost mind;
> In all her trusted secrets, you have part,
> And know the soft approaches to her heart."—*Virgil's Æneid.*

You know all her necessities, and her wishes, and you know too, that by supplying these readily and copiously, you greatly enrich both her and yourselves. But we, outside barbarians, we consumers only of her bounties, which we can only

get by "truck and dicker," by bargaining and buying of you, who stand between "us and her nobility,"—we whose lives have not been cast in so pleasant places; we, some of whom drive the quill, all day, thro' Day-Book and Ledger, in the Counting-Room; we, who instead of speeding the Plough, toil over the Speeder, the Warper and the Loom—in the confinement of Factory Life; we, who instead of sowing the seed of fertile grains beneath the free air of God's open sky,

"Sow only stitches,
In petticoats and breeches;"—*New Song.*

pent up in narrow and low garrets, where every breath exhaled, makes fouler the already pestilent air;

"Work, work, work!
From weary chime to chime;
Work, work, work!
As prisoners work for crime!
Band and gusset and seam,
Seam and gusset and band,
'Till the heart is sick, and the brain benumbed,
As well as the weary hand!"—*Hoods "Song of the Shirt."*

we, who instead of ploughing the rich surface of a grateful earth, knowing that our labor is not in vain, and trusting in the Lord of all the earth, who hath promised that the harvest shall not fail in all enduring time; we, I say, who plough the fields of Ocean with furrows that survive not, "the inconstant billows dancing" on their track—where

"Crowding waves gush with impetuous rage,
Resistless, overwhelming!"—*Phillips' "Splendid Shilling."*

that Ocean, now deceitfully calm, of every rustling wind, and keeping us in long delay,

"Day after day—day after day,
Sticking; nor breath nor motion,
As idle as a painted ship,
Upon a painted ocean."—*Coleridge's "Ancient Mariner."*

and now heaving and surging its mountainous waves before the fury of resistless hurricane, and swallowing us, ship, men, and all, in one huge mouthful, within the fathomless abyss of its insatiate maw,—what know we, the battered mariners of a thousand storms, of the peaceful calm, the unruffled quiet of happy husbandry, with its sure rewards, consequent upon per-

severing industry and steady thrift; what know we of the ways and means of producing the the best yield with the least application of toil and fertilizers? What know we of preparing the soil, of rotating the crops, of sowing the seed, and reaping the harvest? But little, to be sure—and as one of these outsiders, I am free to confess, that I know of the great and glorious art of husbandry, only so far as may be learned by one, who endeavors to go through life with his eyes and his ears open, with a proper study of books pertinent to the subject, and with a mind not permitted to be wholly unobservant or uninformed of what is taking place in the wide world in which he lives. Yet, while I freely acknowledge that there are very many hidden mysteries about the management, from seed to perfect growth, of certain indispensable requisites of animal-life, and creature-comforts, in the way of pears, peaches, plums, potatoes, peas, parsnips, and pumpkins,—corn, cabbages, carrots, cauliflowers and cucumbers,—and the other heterogeneous and multitudinous produce of a well-managed and well-yielding farm,—about which I know nothing, and in which, were I ever so wise, your own large experience might not be the better for my teaching, there are, nevertheless, some other matters, both of the farmer, the farm-house and the farm, of which I have often taken note. Receive what I may say, as the thoughts and suggestions, all desultory as they must come forth, of one whose sympathies have always been with the country and with country-life, and which, therefore, are kindred to you and to your vocation; of an observer, who, looking on with a watchful interest in your success, sees that you sometimes operate with too narrow views, and with too narrow means. As a looker-on upon a game of checkers or of chess, will often detect mistakes, miscalculations and mismoves, of which the players may be unconscious, so, may the observant eye of the careful looker-on, detect errors, and his suggestions point out their remedies and corrections in many a branch of operative life. This thought is of wide application, and has mutual and reciprocal reference to persons engaged in the various pursuits common in civilized society. Men employed in the several handicrafts, are constantly in the habit of

imparting valuable hints and desirable information to each other. The well-read and considerate and thinking farmer may give the most wholesome counsel to a statesman of acknowledged sagacity, and the man whose brain is his workshop, and whose only tool is his well-worn pen, may impart to him of the working-hand, some elementary principle of mechanical philosophy, before unknown to the latter, and perhaps, by that very instruction, enable him to simplify his means of operation, and thereby expedite the perfecting of his work. The rule works both ways, and illustrates again the intimate relation of head and hand.

I say then, that our farmers are not properly educated, and this deficiency of education underlies and implies all other deficiencies; and of education, as the bringing-out of the man unto all possible physical, intellectual and moral perfectness, for that is education, may your tongues and mine never cease to speak in terms of highest honor. I make this assertion of farmers, because I find it to be strictly true. I find it to be true by the use of my tongue and my ears in my conversations with farmers, and by the use of my eyes when I traverse their farms, and view their barns, and note the various appendages and appliances which they employ in their business. I find it furthermore to be true by their own confessions, both of act and of speech. And this deficiency of his education is more the farmer's fault, than the fault of the community, or of the State, at any rate, of the State in which you and I live. For predominating in numbers and influence, as you do, and of right, and for the general good, ought to do, and I pray that you always may,—you can, and may have, all that the State can create and supply, to obviate every deficiency to which I refer. Ask it then, get it, and keep it. If you do not, then blame, as I now blame, none but yourselves. The farming interest is and ought to be, the great and powerful interest of the whole American Republic, and of each separate State of the confederacy. Its members hold in their hands an amount of political power far outweighing that possessed by the farmers of any other, perhaps of all other nations, under the light of the sun. The real agricultural laborers of almost every na-

tion of Europe, are but mere delving, digging, ditching and drudging Gibeonites, upon soil, not a rood, nay! not a button's-size of which, they can ever hope to own;—toiling to the very verge of physical endurance, slaves in all but the name, and some of them slaves in the name and in the fact,—that they may force from the earth, what may be used to satisfy the exactions of a tyrannous government, for the first part,—what may further bloat the exorbitant wealth of landholders, whose domains are already gigantic, for the second part,—and for the third and last and least part, leave a slight residue, to put something called clothing upon the backs, and something miscalled food, under the ribs of self, wife and children,—and provide something else, call it hut, hovel or shanty, as you please, under which they may partially protect their household, their pigs and their poultry; they and their children hopelessly tied down to the same employment,—if ditchers, always ditchers,—if ploughmen, always ploughmen,—if bondagers under a gangmaster, always bondagers,—doomed to labor for life, without hope of relief, and as unable to rise above their caste, as they would be to rise up bodily and to stand erect, were they buried, as was said to have been the Giant Enceladus of old, beneath the incumbent weight of Mount Etna. The same is true, with even added bitterness and hopelessness, with the laborer of Italy, of Germany and of Spain, and with the still lower degraded serfs of Russia and of Poland. In France it is something better, and the strength of the contrast may be known by the fact, that whilst in England, there are but thirty thousand landholders, out of a population of fifteen millions,—there are in France, four millions of land-holders, out of a population of thirty-two millions. That is to say, in England, one man out of every four hundred and seventy is a land-holder,—and in France, one out of every eight. I speak of England proper, excluding Scotland, Wales and Ireland.

Were the square acres in England equally divided among the land-holders, each one would possess one thousand two hundred thirty-six and one-half acres—and were the same done in France, each one would have but thirty-two acres.

Now it is wholly impossible, yes *impossible*, for such facts

to exist, such an unequal distribution of land to be recognized, separate from excessive wealth, on the one hand, and excessive penury on the other. You may have to please the mere eye, and to gratify the mere taste, all the gorgeous and dazzling accompaniments of lavish wealth. You may have all the glittering magnificence of gorgeous coronets, of regal palaces and princely and aristocratic domains, embellished with all the elaborate and profuse adorning of the highest art. But when your eyes look upon the opposite picture, the soul sickens, and the feeling heart rejects the glory and the glitter,—for you know you must have with them, all the deadly bitterness and the foul dregs of the most intense, and squalid and starving, body-and-soul-killing poverty, with its hideous appendages of heaven-daring and hell-peopling crime. God forbid, that you or I, or our children, to the latest time, should know either extreme beneath the sun, that shines upon our soil. God forbid that individual accumulation of land and of wealth, should ever cause, within the limits of our country, the existence of a degraded class of laborers, resembling those over whom English Gang-Masters, men noted for their profligacy and dishonesty, tyrannize. Such laborers are a people in the shape of men, indeed, with legs to walk withal, with eyes to see, with ears to hear, with nose to smell, and tongue to taste, and hands that must

> "Work, work, work,
> The labor never flags;
> And what are its wages?—a bed of straw,
> A crust of bread and rags;
> A shattered roof—a naked floor,
> A table—a broken chair,
> And a wall so blank, that a shadow they'd thank,
> For sometimes falling there."—*Hood.*

Yes, with hands to work, but with no head to design, no heart to take courage, and no strength to be used in throwing off the thraldom under which they are heel-trodden and ground into the deepest and dirtiest dust.

Unfortunate men as they are, they impart nothing but degradation to the national character, themselves degraded, hopeless, disheartened—as well as sunk in the profoundest ignorance. In France, too, the laborers are wretchedly ignorant,

as well as pitifully poor. Could some enterprising Yankee from our town of Lynn, get a government contract out of Louis Napoleon, for supplying the French peasantry with shoes, what a glorious speculation he would make of it,—for there are millions of them, who never had leather upon their feet. And yet they are a cheerful race, like all other Frenchmen, making the best of their condition. Of their habits of personal cleanliness, you may form some idea, by looking at a picture which Punch gives of a group of them, all grizzled with hair, on head, lip and chin, and gazing, in wondering ignorance, at what you and I immediately recognize to be a wash-stand, with its concomitant pitcher and basin, tumbler, soap and towels. I need not speak of the Irish laborer—you see him in the midst of you, and may judge what he was, under the landlord-system at home. The Scotch laborer is far superior to the English in point of education,—and he is considered a more valuable hand. Yet in Scotland even, he is very far below a proper level. I am speaking all along, of the non-proprietor, not of the farm-owning farmer, in Great Britain, and I say of him that his case is hopelessly incurable. He cannot rise. The government keeps him down,—the soldiery, taken though many, if not most of them be, from his own class, and constituting in their aggregate great standing armies, —and of the many direful curses that have cursed and crushed the nations of the earth, these rank among the direst,—these keep him down, and his own ignorance keeps him down, down, down,—chained to labor, with a pot of beer and a pipe of tobacco, for luxuries,—if he can get them.

That you may know something of the Scotch laborer's condition, let me tell you, what one, who was once one of them, told me within a month. "Sir," said he, in reply to my inquiry "my food was parritch,—dinna ye ken what that is?—which I prepared in my ain pot over the fire, stirring in the oat-meal for myself, and when it was cooked, I dipped it out and ate it,—and this was my food, morning, noon and night,—week in and week out. And I wore corduroy breeches and a corduroy jacket, with a blue bonnet and nought to keep the sun from my e'en. My feet had ne'er a shoe,

and so I toiled on, till I heard of America, and I just left home, and wife, and child,—and came along, first to Canada, where I almost killed myself, chopping down trees,—and then to the United States, where I soon felt that I was a man, the which I had hardly felt before. For my wages, I earned two dollars and a half a week, while at home I scarce got half of it. I called it a heap of money. The man that hired me, put me out to board,—and when I saw the first meal, I thought the folks had made a breakfast-party on purpose for me, and were very grand folks, and very extravagant, too, for they had hot tea and hot coffee, and hot cakes, and a plenty of good butter, and plenty of meat, which I scarcely ever saw at home, and I was afraid to sit up to the meal.—But they told me to take hold, and I just did so, and I ate and ate, till I was all full inside, and could hold no more, and I have never seen the time from then till now, that I have not fared as well, —and the man that fails in America, God bless her, to get a good living, whether he be native or foreign, is just a fool, or too lazy to live."

Such were the actual words to me of a once Scotch laborer from near Paisley, who is now worth one hundred thousand dollars, of which forty thousand is money at interest. He lives in a western County of Massachusetts. You may say this is a strong and rare case,—suppose it be, it shows what *can* be done under the influence of institutions such as ours.

But in England, whose abhorence of American slavery, (and all slavery of every degree is just cause of abhorrence,) stands in strange contrast to her unyielding obstinacy of caste, and her persistence in feudal usage, and in such unsympathizing legislation as keeps her laboring poor in a cruel bondage,—England, who cries out with words of burning indignation, and points with one hand the finger of scorn, when she sees her children, on this side of the world, annexing by conquest some thousands of acres from territory of her Mexican neighbor,—while with the other hand, and at the same moment, she herself seizes within her giant and unyielding grasp, measureless fields of the remoter East,—England, who never softens any epithet of reproach which she hurls at us, for the ex-

istence of a national calamity, of which she herself was the great prime cause,—(I have not yet learned that her bowels of compassion have been seriously moved for the bondmen of Poland and the serfs of Russia,)—England, I say, has at this moment within her own borders, either drudging in her fields, or shut out from the light of day, within the impenetrable blackness of her cavernous collieries,—thousands upon thousands of men, women and children, "with no chains, indeed, upon their limbs, but with the iron in their souls, and to whom the words Liberty and Independence are words without meaning."* All over her soil you will find "men with tanned, furrowed faces, and hairy, freckled hands, clad in fustian and leather, in velveteen and corduroy, glossy with wear or wet, soiled by brown clay and green moss, scratched and torn by brambles, wrinkled, warped and threadbare with age." As Thomas Hood, the well known English writer, from whom I have just quoted, (speaking of them) in his "Lay of the Laborer," and alluding to their condition, says, "Their destitution is a naked great fact. There are fathers with more children than shillings per week, mothers travailing literally in the straw, and infants starving before the parent's eyes. Human creatures worried at once by winter, disease and want, as by that triple-headed dog, whelped in the realms of torment." And again, declaring himself not to be responsible for these evils, he says, No famishing laborer, his joints racked with toil, holds out to me, in the palm of his broad, hard hand, seven miserable shillings, and mutters, 'For these and a parish loaf, for six long days, from dawn to dusk, thro' hot and cold, thro' wet and dry, I tilled thy land.'".

All these, without political influence, without power, generally uncared-for and uneducated, are classed by law and by usage into the lowest degree of inferiority;—without object of aspiration and without aim of ambition, for there is no end towards which ambition might reach with any hope of attaining, and therefore ambition itself dies for want of sustenance,—all hope crushed out, and all energy palzied and death-stricken, all these have descended lower and lower, till a paralyzing subserv-

* Colman.

iency, servitude in reality, has withered and wasted the life-blood of their souls. They toil and labor, they sweat and starve,

"They fight and they slay,
For a penny a day,"—*New Song.*

while they who possess the fortuitous privilege of high birth and transmitted wealth, do but occupy and enjoy. Were I an English laborer, no wife should ever share my sorrow, no child should ever call me father, for the perpetual wrongs and unrequited toil of the manhood of such child, would be too dear a cost for all the joys of paternity. Now wherever class is legalized, or established by usage, or sanctioned by public opinion, the state cannot long continue free from peril. There they who once obtain power, and whose high caste becomes strengthened by increase of power, will naturally enough strive to maintain and to perpetuate both, and to transmit them genealogically. With perpetuity of power and its transmission by family, come wealth and its accumulations, and in the train of these, follow luxury, sensuality, effeminacy and tyranny; and then follow the decay and the ruin of the state,—and the rottenness and jarring elements within, give easy access to assaults of foes from without, and these once in,

"Troy is no more, my country *was* a state."—*Virgil's Æneid.*

Labor, I know there *must be*, with books, with spade, and with plough; with shaft and furnace; with fire and steam; with loom and anvil and ship; amidst the whirl of swift machinery; abroad in the silent fields, beneath the arching sky; upon the broad ocean; down in the cavernous depths of earth; every where, at all times and always, man must labor. It is his destiny, and God be praised that it is so. "But I am yet to learn that ignorance and debasement are essential to a supply of labor. The most productive labor is educated labor, and an educated laborer cannot be debased nor hopelessly poor,—and in that country, be it monarchy or republic, the equilibrium of society is best preserved, and its various classes most prosperous and happy, where property and labor fraternize, without jealousy and without oppression, under the constant influence of a wise and diffusive education."—*From an Address to Teachers at Keene, N. H., Aug.* 1851, *by H. K. O.*

Now when we speak of the acquisition and possession of land, the thought at once springs within us, that there never has been, and is not now, a people under the face of heaven, so thoroughly appetent thereof, as the Anglo-Saxon race,—"a part of which we are." They have been stealers of it, or annexers of it, from the earliest times in which History knows them, to the present day, both in their aggregated condition as states or nations, and in their individual capacity as squatters, "a name odious to the ears of all great landholders, and which is given to those enterprizing worthies, who seize upon land first, and take their chance to make good their title to it afterwards."* Wherever foothold or finger-hold can be had, for cause or without cause, there have they grasped and clung with a tenacity that never gives release. The misfortune has been, that, in much of the old world, whence they sprung and wherein they mostly are, the existence of privileged class, or the laws of primogeniture, have been and are now, steadily in operation, to monopolize it by thousands of acres in the hands of a few, and thousands of acres of it now, are shut in from public view, by miles and miles of brick walls, so that in England there is but one man in every four hundred and seventy, who has a right to put his feet on any soil but that of the common highway.

But our fathers began in a different, and in the right way, and the operation of our equitable laws, in the subdivision of the property of the parent, landed and other property, equally among all his children, cannot fail to keep a righteous balance in this direction. The attempt was once made, when our great North-Western territories were secured to us, to divide them into monster estates, to be owned, if so, by a few, and those few, of course, the richer portion of the community, for they alone could buy in large parcels. Against this proposed system of monopoly, the late lamented General Harrison, who by a single treaty acquired for the United States, more than fifty millions of acres, successfully exerted his influence, and we have now a system of division and subdivision of land, in the great West, by which the poorest settler may become a

* Washington Irving.

land-holder. And I can imagine no feeling of higher satisfaction, no cause of heartier gratitude to good laws, and a merciful and bounteous God, than must spring up in the bosom of the exile from oppressive and unequal laws, when he finds himself to be the cultivator of acres called by right his own, and in the possession of which the whole force of the laws of the country, if need arose for it, would be brought to secure him.

Now, farmers of Essex, look about you, and all over the face of this God-blessed New-England of ours, and contrast with the picture I have drawn, the condition of yourselves and of your brother farmers. Contrast, likewise, the amount of social and political power you and they are able to wield,—and the consequent advantages which you may all acquire for yourselves and your children,—advantages acquired, too, not only with no loss to your neighbor, but, on the contrary, with absolute gain to the whole community and to the whole country. For it is susceptible of easy proof, that that which profits the agricultural classes, profits all others. They are to the whole body political, what in Esop's celebrated fable, the belly is to the whole body corporeal. Stint and starve that, and the limbs fail and flag, and pine away and die. Keep that in good and wholesome food, and with good digestion and a clear conscience, and your whole body shall be full of life. Profit the farmer, the great distributor of strength, and you invigorate and vivify the whole social and political body.

The earliest acts of the first comers upon these shores, when shelter had been secured against the fury of winter, and that winter, all weary and sorrowful as it was, had passed away, were acts of tillage, their first labors were agricultural, and from that embryo bud of tillers, has sprung a numerous race of tillers. "Would to God that the children may inherit from such ancestry, the same unconquerable resolution, stronger than bars of iron, which strengthened their hearts,—their patience, 'sovereign o'er transmuted ills;' and above all that faith, that religious faith, which, with eyes fast fixed on heaven, tramples all things earthly beneath her triumphant feet." —*Daniel Webster.*

And to such men and to their deeds, and to their far-seeing and far-reaching policy, you owe, in a special manner, the proud contrast of your rank and condition over that of the farmer of Europe. You are, I speak in the general way, the owners of the soil you cultivate. You own the house you live in ; the barns that shelter your cattle, and secure their winter's food ; the contrivances and tools, that are needed to do your work. None but God is your master, and to none but Him, and to the wholesome laws of the land, which you yourselves have helped to enact, and to the requirements of that social community which you aided to organize, are you responsible. You call no man master, and you are master of over no man. Servitnde is unknown in your vocabulary. Your labor is voluntary, and your assistant laborers are volunteers to you, receiving from you the recompense for that labor, stipulated for between you and them, each his own master, and each following out his own judgment and his own inclination. You and they are citizens, in the highest and noblest sense of that word. You are each and all of you electors, and you may each of you be elected to places of power and trust.— Yea, you, farmer Jones, may be made a legislator or a governor ; or you may find Tom Jenkins, who worked for you last summer, at seventy-five cents a day and his board, put up a candidate for the House of Representatives, and elected by his party, perhaps, over you, the candidate of the opposite party. Such are you, and constituting as you do, by far the most numerous portion of the people of these United States ; spreading far over the rugged hills and the beautiful valleys of New-England, covering the more fertile regions of our Middle States, holding in possession the beautiful and wide spreading prairies of the West, and pouring out a healthful tide of emigration in exodus towards those limitless realms, that lying on the shores of the Pacific, receive at their noon, the rays of our setting sun, your influence is of the widest diffusion and of the deepest power, and you are and will be held responsible that that influence be of the purest kind. You are and you always have been, and must continue to be, the natural conservators of your country's liberties, both in the field and in the

forum,—the true and reliable defenders of her rights and of her soil. My heart glows within me with an honest pride for you, and because of you, when my memory runs back over the history of my native land,

> "The bright and the beautiful land of my birth,
> The home of the homeless, all over the earth."—*Street's Poems.*
>
> ——"That land of every land the pride,
> Beloved by Heaven, o'er all the world beside."—*Montgomery.*

When I read in her records, the lives of those who planted the colonies, embryo states, then,—but now in the full vigor of maturity,—of those, who in succession of time, while they tilled the soil, bought, or acquired by conquest, from its aboriginal owners, wore the rifle slung at their backs, and the powder-horn by their sides, to defend that soil and their homes and its loved tenants from the fire and the knife of the savage, who, when he had parted with his birthright, sought to stay the increase and spread of the newly known white skins;—of those, who, while they worshiped God in the simple temples they had erected for his honor, were equally ready with the earnest prayer, the solemn psalm, or the protecting musket,—"praising God and keeping their powder dry,"—as Cromwell once gave sagacious directions to his soldiers,—of those who stood the brunt and fought through the horrid battles of the French and Indian wars, side by side with the best troops of England,—of those, who improving upon the strategy and tactics which this association in arms with British officers and soldiers had taught them, exhibited their military scholarship in the seven years' war of the Revolution, to such high degree, that the admiring world awarded them the medal of their country's liberty. Farmers were they, with Farmers for leaders, and all led by Farmer Washington—and there is not a battle-field, from Lexington to Saratoga and to Yorktown, that did not drink to repletion the blood of farmers;—when I read, I say, the history of all this, my bosom glows with an honest pride,—words of fitting admiration fail my tongue, and I can only thank God for an ancestry of so true nobility. And should the time ever come, which God in mercy prevent,

when in His Providence the liberties of our country shall be assailed by foreign foe,

> "That should dare to march upon her peaceful bosom,
> Frighting her pale-faced villages with war,
> And ostentation of despiteful arms,"—*Shakspeare's Richard II.*

Or be attempted by domestic treason,

> "For in alliance, amity and oaths,
> There may be found some false dissembling guile,"—*Shakspeare's Henry IV.*

Then let him who should be privileged to participate in her defence, but have at his back, sons of New-England, freemen of free-thought, free tillers of their own free soil, and he need ask no brighter omen of successful fight; specially so, when he should know, as he surely would, that every mother, daughter sweetheart and wife, in the land, would arm and urge them to the strife;

> "Yes, true to God, to Freedom, to Mankind,
> If their chained band-dogs foemen shall unbind,
> Those stately forms, that bending even now,
> Bow their strong manhood to the humble plough,
> Shall rise erect, the guardians of the land,
> The same stern iron, in the same right hand,
> Till our hills thunder to the parting sun,
> "Their sword has rescued what their plough-share won."—*O. W Holmes.*

A slight anagrammatic change makes "farmer" to become "framer," and they were, indeed, the chief framers in erecting the great temple of our liberty, and it was by their sagacity and far-seeing judgment, that the foundations of our constitutional liberty, were, after the great struggle in the field was ended, laid upon a foundation that can never be moved, so long as the land shall be blessed by the presence, the valor, and the wisdom of farmers.

But if the farmers have done so much, and done it so well, the nation will confidently look to them to do still more. If they have been

> "Great in the council, mighty in the field,"

the country will expect of them, and have a right to require of them, still greater and mightier deeds. And to be equal to this most just expectation and this most righteons requirement, the farmer must be educated,—yes, educated. Not that he is

now, or has been, an uneducated man; but he is not, and has not been educated enough. He must be educated still further,—educated specially for the great work of his calling, that he may be enabled to bring forth greater and better results, by the application of a more enlarged mind, and a wider and more liberal study in Agricultural Science; that he may be enabled to double his crops, without exhausting or impoverishing his soil; nay, by actually enriching it, may secure the largest return for the money expended and the labor bestowed;—and educated collaterally, that he may, as a good citizen, mindful and watchful of the best interests of his country, take a prominent part, either as an elector, or as an elected member of some branch of Town, County, State or National Government. All these he must do well, and he may and will do them well, if he be well educated. All this he may do, without peril of becoming a brangling demagogue, or a hungry seeker for place and for its profits. I think his acquired tastes as a farmer, will protect him against temptation in this direction. For I cannot conceive, if he be a true farmer, and a devoted lover of a farmer's life and a farmer's joys, that he would be willing to change the plough and the sweet odor of field and wood, the varied cheerful music of nature that fills and blesses the country air, the secure quiet of his home,—his fields of ripening corn, his sheaves of golden wheat, his ruddy apples, the mellow fruits of his orchard,—his rich crops of yellow grain, his mown lands, glittering with sun and dew,—his verdant pastures, and his groves, "God's first temples,"

> "His rills, melodious pure and cool,
> And meads with life and mirth and beauty crowned;"—*Beattie's Minstrel.*

his majestic oaks, and beautiful elms,—his herds of lowing cattle and his bleating sheep,—his mountains, valleys, hills,—the glories of his early morns, the gorgeous beauty of his setting suns, and the radiant shine of his harvest moons,—the fantastic yet brilliant garb of his autumn leaves,—for all the pomp and circumstance, the tinselled dazzle and the cumbrous splendor of fashion and the town,—for a bald chance of a first and last speech beneath the dome of the Senate, or for a rude

jostle for eminence among a crowd of political brawlers and scramblers for office,

——"Gleaners of the spoils,
Who breathe around a pestilential breath,
Till virtue's self is tainted with the touch."

*Dawe's Athenia of Damascus.*

And yet he would do wrong, did he not keep up a well-judged participation in political matters, and it is here, in the United States, here and now, that the just position of you farmers, as a controlling element in the government, is acknowledged, and that your influence is felt, is desired, and is welcomed.

But turning to the more grateful subject of the farmer's agricultural education, I find a wider field of interest opening out before me, too extensive to be discussed in detail, even if such discussion were not an unpardonable exaction upon your patience. I shall do no such thing, but I do urge with special earnestness upon you, that while you cultivate your farms and bring to bear upon them, every appliance that can enrich and invigorate them, and so increase their productiveness,—making two blades of grass to grow where but one grew before,—making two golden apples to smile from the branch, where but one before

"Did glitter in the sunbeam;"

that doing so much for earth, you should not omit to do something towards enriching and invigorating your own intellect, that you may make two useful thoughts to spring where but one sprang before; something towards the cultivating of your moral nature, that you may make two useful acts to live and do their blessed work, where but one had blessed before. Your own *interest* is deeply concerned, and certainly promoted by a steady perseverance in such culture. I tell you that the wiser you are, in all proper and useful wisdom, the better and the more abundant will be the results you can secure from every acre of your property. The more you acquire by careful study and thought and observation, with the wiser and surer judgment, and with the greater certainty of success, under the blessing of Him who hath given the earth to man for a pos-

session, and hath insured by His promise that can never fail, that "seed time and harvest, and day and night, shall not cease, while the earth remaineth," will you prepare the fields of that earth for the reception of that seed, and wait the just time of day and of night, for the coming and the gathering of that harvest.

The farm was made for the farmer, and not the farmer for the farm, and is not, then, the farmer greater than the farm,—the man, than the soil he treads upon? Will you "rise up early and sit up late, and eat the bread of carefulness," that you may improve the lesser, and will you, with stolid indifference, neglect, and waste, and destroy the greater? Nay, do not commit so short-sighted a folly! Cultivate yourselves;—and your homes, your wives, your children, and your farms shall feel the benign influence of such culture, and be the better for it. Nay, more, all social relations shall be the better for it. Your Town, and State, and your Country, shall feel its wholesome influence, and all men shall rise up to honor and to bless you. In fact, I do not exactly see what right any man has to neglect the spirit of culture. His own self requires, and has a right to require, that he give diligent heed to it. His own family, that other part of himself, requires it of him. Society and the country require it of him. God requires it of him, for that great and good Book, that you and I, and all of us,

> Do not read
> Half so much as we need;

preaches to us, from every page of its inspiration, that we neglect not "the getting of wisdom and understanding,"—that we "abound more and more, in knowledge and in judgment." All nature cries out upon you and upon me, and upon all of us, to study the mysteries that dart upon our view, from every shimmering star that twinkles in the sky,—from the firm shine of every planet, that walks its stately course round the great central sun,—from the blazing comet, that with flaming train,

> ——"Doubles wide
> Heaven's mighty cape; and then revisits earth,
> From travel of a thousand years;"—*Young's Night Thoughts.*

from the pale moon, that with soft beams and milder light,

steals from her dimly lighted chambers of the East, and walks her way through the long, silent night,—from the great sun himself,

——"As on the wings
Of glory, up the East he springs;
Angel of light, who from the time,
That Heaven began its march sublime,
Hath first of all the starry Choir,
Trod in his Maker's steps of fire;"—*Moore's Lalla Rookh.*

from the broad Earth, upon which you tread, whose every mountain and valley, every hill-top and plain, every forest and prairie, every clod and every smallest dust, every ocean and sea, and lake and river, and gurgling brook, and drop of water, is teeming with the great mystery of life, developed or yet to be developed. Will you walk upon its glorious surface, as men who see nothing, yea, blind as the worms and moles that burrow in its dirt,—seeing nothing of the transcendant wonders that are about and above, and beneath you?

"There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy."—*Shakspeare's Hamlet.*

and will you dwell within this great laboratory of God, wherein He works out the mystery of His experiments, and refuse the invitation which even He gives, to take benefit of His lessons and their teachings, and to be wise to your own profit? Will you listen to the murmuring of the brook, that irrigates your meadow, and makes its rich crop ready for your scythe, and live in ignorance, that every drop of its waters is but the chemical result of the mingling of two invisible gases, without the presence of one of which in all the watery world, the other would, by its specific levity, seek

The upper regions of the air,
Doing, I know not, what great mischief there;—*New Song.*

And leaving the cavernous abysses of the ocean revealed to the light of day, with

"Wedges of gold, great anchors, heaps of pearl,
Inestimable stones, unvalued jewels,
Wooing the slimy bottom of the deep;"—*Shakspeare's Richard III.*

and its myriads of known and unknown monsters, to flounder, to struggle for water, and to perish for the lack of it?

Will you walk abroad and breathe the pure atmosphere of

Heaven, neither knowing, nor caring to know, that, although apparently invisible, it is really not so; that it has all the properties of matter,—inertia, weight, impenetrability, elasticity, and compressibility,—and yet is likewise but the chemical union of two invisible gases, in such mixture, that while one alone would produce death to all that should inhale it, and the other alone would produce excess of life,—the two are so justly and nicely balanced by the wise laws of an all-wise God, as to form an air, at once best fitted to support life, animal and vegetable, and best fitted for respiration? Are you willing to be ignorant, that if to certain proportions of the three gases of which I speak,—oxgen, hydrogen and nitrogen,—you add carbon, which is, in its pure state, as furnished by nature, the diamond that dazzles from the brow of royalty, and in its ordinary form, the charcoal that dinges and darkens the face of the collier, you have, by such addition and combination, a product, of which are made your trees and plants, your shrubs and bushes, your grasses and grains, your fruits and your flowers?

Ah! I very much fear, that you too often mow down the grass of your fields for the food of your beasts,—you too often thrust the sickle into your yellow harvests of wheat, and gather it into your rich granaries; you heap up the fallen leaves and decayed wood of your forests for manure,—you hew down the mighty oaks, that adorn your fields, and prostrate the tall pine, the monarch of your groves, without thinking what wisdom of God is displayed in the union of the few and simple elements, which, in chemical combination, make them what they are; and how by the use and power of those very elements, derived from the decayed compost of the barn-yard, you yourself, though ignorant of the process, are making blades of grass and spears of wheat to grow, and leaves and trees to come again and to be renewed upon the face of the earth. There is both profit, and a profitable pride in knowing all these things. Sir Walter Scott prided himself more on his knowledge and skill in the composition of manures, than on all the wonderful creations of his genius as a novelist.

Your soils consist of other chemical elements, such as silica, alumina, lime, magnesia, the oxide of iron, potassa and so-

da, and these came from the disintegration and comminution of the primitive rocks which constitute so much of the mass of the earth. The seeds that you commit to these soils, the bare grain,—"it may chance of wheat, or of some other grain,"—feel the mysterious working of God's power upon them, waking them into life, and directing them in search of aliment appropriate to their growth. But these seeds must be cast into soils proper for their reception, their nutriment and their growth. If you cast them carelessly by the way-side, the fowls of the air devour them,—if you cast them upon stony places, where there is no deepness of earth, the scorching sun dries up their sudden growth, and they wither away,—if you cast them among thorns, the thorns spring up and choke them. But if you cast them upon good ground, they bring forth their thirty, their sixty, yea, even their hundred fold. So teacheth the parable of Christ. Who hath ears to hear, let him hear, and let him learn.

But what is the proper ground, and where is it on your farm, Mr. Jones,—where is it on yours, Mr. Stebbins,—where is it on yours, Mr. Thompson? I dare say you can tell me. But if you had bought your farms yesterday, and had never heard nor known anything about their peculiarities of soil, nor any thing about the position and characteristics of the various lots suitable for the various agricultural products you propose to cultivate; could you tell me then, without inquiry, without examination, without reflection? Now these very matters of inquiry, examination and reflection, are elements and very essential elements, of agricultural education. And he who instructs you in what you must know in these premises, before you can take the first safe step, is, for the time being, your agricultural schoolmaster, and you are his pupil, and are in the "pursuit of knowledge under difficulties," difficulties which you would not have to encounter, had you been previously so properly educated, as that you could, by your own personal examination of the various localities on your newly purchased lands, judge and decide for yourself, in what part of them, were the soils adapted for the largest yield from the crops you propose to put in. Or, if you designed to raise large crops of

certain single agricultural commodities, decide, before purchase, whether any particular farm in the market,—or whether the soil of the County or of the State, were suitable for your purpose.

Again, having a superior agricultural education, you may easily decide, if you find a farm, which for satisfactory cause of locality and neighborhood, you would desire to purchase, whether it lack the elements, any or all, necessary to the object you have in view, and whether it can be made to receive them, and so be brought into the right condition. I have read, somewhere, an account of the purchase of a farm, by the Hon. Reverdy Johnson,—near Baltimore,—the soil of which was reduced to the meanest condition of impoverishment. The last crop of corn raised upon it, yielded the infinitessimal quantity of one peck to the acre. Not knowing what to do, nor getting from the agriculturists about the neighborhood, any thing more reliable than guess-counsel, he applied to a chemist,—not again to practical farmers, for they had failed him,—but to a chemist, whose vocation was not in the field, and about the soil, but in the laboratory, and the chemist visited the place, took portions of the soil and analyzed them. He found a plenty of magnesia, of lime, of potash, iron and organic matter. Yet one thing it lacked. One element of a fertile soil was wanting,—and that one absent, all the rest were nothing worth,—even as gunpowder without the kindling spark. There was no trace of phosphoric acid. He directed that the biphosphate of lime should be applied, and this having been thoroughly done, the farm in fervent and substantial gratitude for this application of the proper food to its starved and exhausted frame, poured out its rich wheat at the figure of twenty-nine bushels to the acre. Now this curer of a bad and almost hopeless soil, as it seemed to the common observer, was a book-farmer, nay, rather a book-worm, who had never been at the plough-tail, never handled a rake, nor swung a flail. What would you have done, Mr. Anti-book-farmer, but poked your way towards the cure in the dark, trying experiment after experiment,—perhaps hitting the nail on the head, or perhaps hitting and bruising your own fingers,—that is, wasting

your time, your money and your labor to no purpose;—supposing you to work for the remedy on the terms of "no cure, no pay,"—and despairing of all success, have recommended to the Honorable gentleman, if he had no other means of living than the yield of this hopeless farm, to sell it for the most he could get, pack up his traps, and push for the West or for California.

I am aware that there are very many most excellent farmers, possessing great practical skill in their vocation, and so producing most excellent results in their culture of their farms. And were you to take issue with me, and to ask the question, whether there have not been more successful farmers, without education specially as such,—than there have been successful farmers with education, it might be difficult for me to sustain my argument by proving the latter to have been the case, though perhaps a good point might be made by showing that one cause for its not having prevailed is, that it is of comparatively recent date, that the subject of the education of the farmer with distinct reference to his calling, has been specially urged. Cicero has some remarks, which, with their reasoning and with but slight change, I might adopt here—though originally applied in another connection.—"I own" he says in his oration for the Poet Archias, from which I have already made quotation,—"I own, that there have been many men of excellent talent and of pre-eminent virtue, who, without learning, and by the almost divine force of nature herself, have been wise and eminent,—nay, farther, that nature without learning, is of greater efficacy towards the attainment of glory and virtue, than learning without nature. But then, I affirm, that when to an excellent natural talent, the advantages of learning are added, then there results from such union, something great and extraordinary."

The appeal I have made thus far, has been urged more directly upon the farmer now actually engaged in his work, and not in reference to the prospective farmer. For the right education and culture of the latter, I shall have no fears, if I can prevail upon the former to yield to my arguments and become, as soon as may be, an educated man, self-educated, and they

are among the best educated. The moment he shall feel the benefits of education, he will be most desirous that the young farmer should have those benefits before he goes between the plough-handles, or first swings the scythe. How the latter shall be provided for, and what means of right education shall be secured,—will naturally suggest themselves to the mind of the former, when it shall itself have been liberalized by the influences of this very education, for which we plead. He will require an Agricultural Department to be established by Congress, as a part of the executive organization of the General Government. This, like many other useful and necessary projects, which it is the proper office of Congress to discuss, and when approved, as this particular one could not fail to be approved, to put into active operation, has, I regret to say it, hitherto failed of success.

Again, farmers will require that there be in each State, what has already been established by our own Legislature at its last session, a State Board of Agriculture, with a working Secretary, competent in every department of agricultural science and art, to act as an organ of communication, between the State Government and the several Agricultural Societies throughout the Commonwealth, and to communicate instruction and advice to every farmer who should consult him. What an impulse to agriculture would the right man for the place impart? They will further require that there be created, what Massachusetts yet lacks, agricultural schools, in such number and location as would accommodate the several parts of the State, to be taught by men of extensive attainment in all science having any connection with agriculture, aided by men already skilled in all the practical operations of actual farming.

I will not stop to make detailed statements of the studies that should be pursued in such schools. They have been exactly and admirably set forth in the Report of the Commissioners upon that subject, made to our Legislature by Professsor Hitchcock, in the session of 1851. Let me commend this Report to your notice in all its minute details, as worthy of your special attention. Let me further commend to your careful reading, the excellent Address delivered before

your Society by the Rev. Mr. Braman of Danvers, at your last anniversary. The argument in favor of what is here recommended, (and this recommendation is but the reiteration of what has been recommended a hundred times before,) is there most fully and admirably set forth and needs no addition from me. Into these schools, I would be glad to see thronging the sons of our farmers, who intend to follow the pursuits of their fathers, and our young graduates of College, adopting the agricultural life, in preference to taking their chances in professions already over-stocked, and all selecting the country for a residence, rather than risking the life of their bodies and souls amid the multitudinous temptations of the city.

The chief obstacle which the present farmer will encounter in his effort at self-education, will be his own prejudices and those of his class,—and these prejudices barricade the way of his progress. I remember that when a boy, and not obeying the counsel of my mother, on a certain occasion,—and I found out, after taking my own course, that I had made a great mistake,—I remember that she looked at me reproachfully, and said, "Harry you stand in your own light." A gentleman who was near and heard the remark, suddenly turning upon me, cried in my ear, with so loud a voice, that its echo has not left me in the forty years that have since elapsed, "Harry, get out of your own light." Now I say to every farmer who pertinaciously clings to old maxims, old modes, old tools and old traditions, simply because he thinks,—if he think at all in the matter,—that they must be the best for their odor of age, and obstinately shuts his eyes, that he may not see anything new, and plugs up his ears, that he may not hear anything new relating to his craft, that he stands in his own light, and I should like to scream into his ear, with the intense shriek of a steam-whistle, and have the sound tickle his tympanum, as it will mine to my dying day,—"Get out of your own light!" Let the sun of science, which is pouring and diffusing its life-giving and gladdening beams all over the manipulatory processes of every art and craft, shine in upon, and illumine and benefit yours,—yes, yours, which, in fact, "is no longer a mere art or craft, but," as Marshall, an English writer of the last

century well observes, "is a science, which, when viewed in all its branches, and to their fullest extent, is not only the most important and the most difficult in rural economies, but in the circle of sciences."

Nay, it is both a difficult science and a difficult art, for it comprises as a science, a knowledge of the animal, vegetable and mineral kingdoms; a knowledge of the chemical constituents of soils, and of atmospheric phenomena, of every sort; and a knowledge of the mechanical agents necessary in agricultural manipulations,—and as an art, it implies a knowledge of the proper method of selecting and laying out of lands, and of their management and improvement; a knowledge of the best modes of culture; a knowledge of the economy of live stock; of the best method of raising vegetables, and of managing a dairy, and of entering the market with his merchandize, whether as a wholesale or retail product.

If then science reveal to you new implements of husbandry, professing to save labor and to increase product, try them, so far as they may be applicable to your exigencies, and see if they be true to their profession. You are not called upon to believe in every thing new, any more than you should believe in every thing because it is old. Try what you think may be useful to you, and let your neighbors do the same. Let the good be put to good use, and reject the bad. In the course of my experience as a manufacturer for a few years past, my attention has been frequently called to many articles of machinery, either wholly new in their construction, or intended to be applied to exisiting machinery to correct and improve its operation;—to increase product with the same amount of labor, and by so doing, to cheapen the cost of the manufactured article. Whatever, after proper examination and discussion and counselling with the experienced men that assist me, seemed to have claim to a trial, received it. If it passed the ordeal, it was adopted; if it failed, it was rejected. You will find your account in doing the same, whether in reference to a new farming implement, or to new modes of using old ones; to a new method of preparing your compost of manure and of applying it to your grounds, or to new modes of planting, sow-

ing, and of managing the growth of crops, or of reaping and harvesting them.

Now I confess that while I have all the respect for old implements and old modes of husbandry, and for ancient farmers and ancient writers on farming, many of whom wrote and counselled admirably, I have not any more, and will not give them any more than just what they deserve. I remember that when quite young, I once saw a farm-laborer winnowing grain, by the slow and tiresome operation of tossing it up and down in a sieve, the heavy parts dropping in a heap, and the chaff being driven off by the wind. This mode, if deserving of praise, and of being continued in the ratio of its antiquity, would be entitled to very special commendation and perpetuity of use, for it was practised by the Roman laborer before the birth of Christ;—and I find, in Homer's Iliad, the events of which date back to the remote period of nearly twelve hundred years before the Christian era, the following allusions to the same implement and practice;

> "As from the peasant's fan the wafted chaff,
> Parted by golden Ceres from the grain,
> Falls in thick showers and whitens all around."—*Iliad, V.* 499.

And again,

> "As vetches, or as swarthy beans,
> Leap from the van and fly athwart the floor,
> By sharp winds driven und the winnower's force."—*Iliad XIII.* 588.

Now this is old enough. But since this sight of my youth, I have seen another, and I certainly think, a better mode, and that is winnowing by a machine, which, "instead of waiting for whatever dispensation of wind, Providence was pleased to send upon the sheeling-hill," as honest and simple old Mause argued in "Old Mortality," raised it by the human means of pulleys and fans, and did the business of separating the chaff from the wheat in a better, quicker, and cheaper way. What more would you have? Yet the use of a winnowing machine was obstinately opposed by the farmers of Scotland, where it first appeared, and was denounced from the pulpit as a devilish and presumptuous invention of the arch enemy of souls. And this same obstinacy of prejudice, and stolid sticking to old habits, are not yet dead, though they must eventually fade

out before the light, the spirit and the progress of the age. If nothing new is as good as the old, and the old was well enough as it was, why then, use your fingers instead of a fork to put your meat into your mouth; use a piece of bark for a plate;—use the camel, the ass, the mule,—for all purposes of vicarious locomotion, and put away your hissing-hot and thundering iron-horse with his hurricane speed, and his shrieking, deafening whistle. None of you believe in any such nonsense,—and if improvements in these things meet your approbation, and you would never consent that the world should be without them, why will you not use the same candor of judgment, in relation to novelties, either of implement or of operation, in your own calling?

Do not misunderstand me, and go away with the impression that since I commend to you the new and the progressive, I have a low opinion of all the old of all ages of the world,—or that I condemn or think slightingly of ancient husbandry. Let me prevent such unjust deduction. In the many years which I spent in stndying the classical writers of Greece and of Rome, I could not do otherwise, even with but a moderate degree of attention, than to acquire some knowledge of the agriculture of the ancients, and it was my first design to address you on that theme, contrasting it with the methods of the moderns. But recording my thoughts as they rose within me, I was led by them in another direction. Yet let me here say in brief, what I might have said more in detail, that agriculture was held in the highest estimation among the earlier and later nations of antiquity. Kings were its "nursing fathers, and Queens its nursing mothers,"—and the mightiest Monarchs saw and felt their highest glory to be found in honoring the plough. Egypt ascribed its introduction to mortals, as the great work of her gods, and Greece and Rome dedicated temples and erected statues in its honor. The greatest geniuses and the noblest intellects of antiquity threw the whole force of their minds, in extolling its praises, in advocating its importance, and even, like glorious Virgil, in giving practical directions in all its important details,—and many of these details furnish not only curious, but really useful in-

formation. Some of the maxims of the Roman farmers are almost identical w.th those recently, if not still in use among the best modern English farmers. It could not be uninteresting to the studious farmer, nor "altogether useless," as Dickson rightly observes in his elaborate work on "The Husbandry of the Ancients," to communicate to him a knowledge of the practices of ancient nations, famous for their wisdom, and whose greatest men applied themselves to the study and practice of Agriculture."

I have said thus little in reference to the husbandry of antiquity, that I may not be misinterpreted in being said to have spoken lightly of it. It is not that I esteem or love ancient husbandry, its old modes and old tools and devices, less,—but that being nearer and more interested in things of my own day, and desirous of their good, I love modern husbandry more, and greatly desire its further improvement. In securing that improvement, you will take all the good you can find in the store-houses of former days, and add all the good you can get, from the studies, the researches, the suggestions and the implements of modern times.

Be, then, more liberal and enlarged in your views; more ready to examine into what is going on in your line of life in other localities; more earnest to test alledged improvements; more willing to examine, than to sneer at them, when proposed for your consideration; more willing to let your natural good sense, by its own unimpeded action, deliver you from the shackles of old prejudices and old obstinacy against progress, and you shall find light shining upon your way with a brilliancy before unknown to you, and guiding you to the attainment of results that your best imaginings had never conceived. Every thing about you will be bettered. That tasteless, ungraceful and awkward "palace of pine boards, grown venerably black with time,—but so rickety, flimsy, that every blast of wind gives it a fit of the ague,"*—and shall give way to a structure, which, with its symmetrical proportions, its thorough workmanship, and its beautiful home-expression and harmony with the rural objects

* Washington Irving.

that surround it, shall combine all that is useful, convenient and comfortable for its inmates. The smallest house can be so made. You will find that the beautiful in architecture, though distinct from the useful, is in harmony with it, and that they each aid and adorn the other. I do not say that every farmer must go to work and demolish his old house, and put up a new and elegant one. That might be a pleasant thing to the lumbermen, the masons, and the carpenters,—but might not be so well for the farmer's pocket. "Fun for one, but death" to the other, as said the frogs in the fable, might apply to such case. But I do say that when he does build one, or when he alters, or adds to the old one, he need not persevere in perpetuating all that is homely and tasteless. Many farmers, I know, take the "old homestead." Well, that "old homestead" hath many delightful associations connected with it, from "the old oaken bucket that hung in the well," and the row of old beehives that murmured beyond the wall, to the pleasant faces that clustered round the family hearth. But the "old homesteads," when repaired, as they must occasionally be, may be repaired by the eye and hand of good sense and good taste. Its associations shall be all the more pleasant for the embellishments you may add to it, all in the rura way. A grape-vine, a climbing rose, the "Queen of the Prairies" or the "Baltimore Belle" may be thrown against its walls, or be made to twine above the door or window. In front, some shade trees, our beautiful maples, or ashes or limes or double-flowering cherries and apples, may keep off the intenser sun of summer. Within the front enclosure a neat flower-garden, yes, *a flower garden*, with perpetual roses, and iris, and gladiolus, and asters, and dahlias, may be arranged with the least amount of labor required. and the good wife and the children may take the care of it, and with you enjoy the comfort of it. I say the good wife and children,—for these every farmer must have,—or home is no home. A wifeless, childless farmer, one whe is so by culpable coldness and neglect of his own, is a selfish, chilly-hearted monster, who walks his dismal pilgrimage in mouldy loneliness, and should know no peace till he yields to matrimony. There are very many

faculties given us by our Maker, to be cultivated by us for our own happiness, and the more we cultivate the innocent and refined ones, the happier and the better we shall be. Home, with all its concomitants of wife, children, books, music, flowers, and social intercourse, is, and ought to be, the dearest spot of all the earth. You may make it, or mar it. Adorn, then, your homes, within and without, and home shall adorn and comfort you. Your children will be more attached to it, and less likely to leave it for Californias or Far-Wests, and more likely to settle in its neighborhood, and to build other and tasteful abodes. Let me commend to you, in this connection, the work on "Country Houses," by the late lamented Downing, who perished in the "Henry Clay," to the deep sorrow of every admirer of the beautiful in architecture, and in gardening, and who had done so much for the diffusion of an improved taste in all that relates to rural affairs. There perished the tasteful student of nature, whose life has been to his countrymen, a mission of beauty; whose ripe judgment, and vivid imagination, and loving insight into the sweet tender secrets of mother-earth, have been bodied forth in artistic combinations and suggestions, that have awakened a new spirit of taste in the community, and made many a glorious landscape a monument of beauty to his loved and honored name.

His books will teach you, how easily you may combine the beautiful with the good, the useful with the elegant.

The whole country suffers when such men as Downing and Norton are taken away. The latter gentleman was appointed, a few years since, to a new Professorship in Yale College, that of "Chemistry applied to Agriculture and the Phenomena of vegetable and animal life." Though young, he was one of the highest ornaments of learning, and gave assurance that could not fail, that if spared, his influence and his teachings would prove of the highest value to the agricultural interest. Each was invaluable in his vocation, the one leading the way and directing to the useful, and the other showing how to unite ornament and beauty to utility.

Nor shall your dwelling only, feel the good effects of the improvement in education and taste, for which I have pleaded.

Every thing around you shall be bettered. That rickety old barn, which the winds of Heaven, and the rains and the snows have desolated and rendered unfit to pretend to house the shivering cattle that deserve a better fate, shall no longer disgrace you its owner, and the ground it stands on. You will supply the beasts that faithfully serve you, with comfortable quarters, remembering that the more thoroughly you secure them from the cold of winter, the less food they will require. "For it is well known, that the extra supply of heat needed by animals in cold weather, if not supplied by warm housing, must be supplied by an extra consumption of food, and yet this extra food adds nothing to the flesh or strength of the animals."—*Downing's "Country Houses."*

Cleanliness will also characterize its interior, and you will be sure that all the manure shall be thrown into its appropriate place, and none of it be allowed to accumulate and stick upon the flanks of your oxen and cows, injuring their health, and insuring to yourself the reputation of being a nasty sloven.

That uncared-for piggery, that slough of despond, that stew of stercoraceous stench, that Serbonian bog of fathomless filth and miasmatic putrescence, in which your bedaubed swine struggle and wallow; and that unsightly quagmire of needless nastiness, in which an unsympathizing slovenliness compels the "lowing sweet-breathed kine" to slump, and wives and daughters to wade, ancle-deep, as they toil to reach the "milky-way,"—these shall both disappear, to give place to accommodations which, combining neatness with utility, shall be at once agreeable to the eyes, and just as profitable to you, if not more so, as laboratories and store-houses of your indispensable compost. This same spirit of improvement will exhibit itself all over your farm. You will have better stock, better trees, better fruits, better grains and vegetables, better fields, and fences, and walls,—better people about you, better neighbors, and yourself and household be better themselves and betterers of the whole community.

*Farmers of Essex:*

The subject upon which I have addressed you, no mind can

exhaust, no pen can do it equal justice, no persuasion of forceful argument can too strongly urge that we all enlist with earnest devotion in its behalf. I pray God that we may ever be an agricultural people, farmers farming their own farms,—for if such, we can never be an enslaved people, we can never be a people of caste, we can never know the unfortunate extremes of inordinate wealth and desolate penury. The realization of the prayer of Agur, shall be seen in the midst of us, in that just and equal balance of condition, wherein are to be found the purest happiness, the surest contentment, the most persistent exercise of all practical goodness; the most quiet, refined and enduring happiness of home, and the wisest administration of public affairs. That will be the enviable lot of our people, and these all will originate with, and depend upon the influence of the people of the farms, and are to be sustained by them, the guardians of the liberty, the conservators of the public peace, the unfailing supply to meet the country's wants, the sure source of the country's prosperity,—the race among whom virtue delights to dwell, and with whom, as rightly said the great Roman Bard, Justice, when she forsook all other spots of earth, to return to her native heaven, prolonged her latest stay.

> "Be your race known, in coming time, to fame,
> New honors adding to your country's name."—*Virgil's Æneid.*

The men of Greece held annual gatherings to celebrate their solemn games. The greatest, the wisest, the best, came up to these high festivals. Yea,

> "Even the gods that walked their skies,"—*Anacreon.*

descended to preside and to encourage. The victors in the chariot and horse and foot-races, the boxing and wrestling matches; in the throw of the dart and the discus, were crowned with triumphal wreaths, and loaded with substantial and enduring honors.

You have gathered here to a higher festival, to sublimer spectacles, for a nobler and more blessed purpose. For it is not to a contest of physical strength, having reference to success in fight,—but to a moral struggle, a friendly competition, to know who are to prove most successful in securing to Coun-

ty, to State, and to the Republic, the richest sources of happiness, prosperity and peace.

Cesar stood firm and calm amid the reeking daggers of his assassins, till Brutus stabbed!

> "Now Brutus, as you know, was Cesar's angel;
> Judge, O ye gods, how Cesar loved him!
> For when the noble Cesar saw him stab,
> Ingratitude, more strong than traitor's arm,
> Quite vanquished him; then burst his mighty heart!"
>
> *Shakspeare's "Julius Cesar."*

As Cesar had loaded Brutus with favors, so have the Republic and the State lavished high honor, and bestowed encouragement upon you farmers. As Cesar loved Brutus, and confided in him, so does your country love and confide in you. Should you, like him, prove traitors to that love, should you disappoint her trust, then all hope lost, her last confidence failing her, with that look of unspeakable anguish which Cesar, death-stricken, cast upon Brutus, and those dying words of reproach from his lips, "And you too, Brutus!" her mighty heart will burst!

Take heed!—for the pillars of her falling palace will crush you in the common ruin,—and all the worst horrors, the worst shame, the direst woes of an enslaved race, shall fall with the bitterest oppression, yet all deserved, upon you.

Yet it cannot be so, so long as you are true to yourselves, and true to your own interests, so long as you regard your vocation in its true light, so long as you love it for its own sake, so long as you adhere to it, and commend it to your children.

Happy both you and they, amid the large bounties of the teeming earth; happy amid the mighty forests, the green meadows, the fertile fields, the tree-crowned hills, the bleating flocks, the lowing herds, the smiling villages that beautify the land; the churches and the schools that edify and bless.

END OF ADDRESS.

In confirmation of the correctness of the remarks made in the foregoing Address, on the condition of the English Farm laborer, the writer adds the following extracts from a very interesting work by F. A. Olmstead, a farmer of Staten Island, N. Y. Mr. O. travelled in 1850–51, *on foot*, through the Western and Southern Counties of England, and published his observations under the title of "walks and Talks of an American Farmer in England."

"Our guide was a man of about forty, having a wife and seven children; neither he nor any of his family (he thought) could read or write, and, except with regard to his occupation as agricultural laborer, I scarcely ever saw a man of so limited information. He could tell us, for instance, almost no more about the church which adjoined his residence, than if he had never seen it,—not half so much as we could discover for ourselves by a single glance at it. He had nothing to say about the clergyman that officiated in it, and could tell us nothing about the parish, except its name, and that it allowed him and five other labourers to occupy the "almshouse" we had seen, rent free. He could'nt say how old he was, (he appeared about forty,) but he could say, "like a book," that God was what made the world, and that "Jesus Christ came into the world to save sinners, of whom he was chief;"—of the truth of which latter clause I much doubted, suspecting the arch fiend would rank higher among his servants, the man whose idea of duty and impulse of love had been satisfied with cramming this poor soul with such shells of spiritual nourishment. He thought two of his children knew the catechism and the creed; did not think that they could have learned it from a book; they might, but he never heard them read; when he came home and had gotten his supper, he had a smoke and then went to bed. His wages were seven shillings, sometimes had been eight, a-week. None of his children earned any thing; his wife, it might be, did somewhat in harvest-time. But take the year through, *one dollar and sixty-eight* cents a-week was all they earned to support themselves and their large family. How could they live? "Why, indeed, it was rather hard," he said; "so hard, that sometimes, if we'd believe him, it had been as much as he could do to keep himself in tobacco!" It is an actual fact, that he mentioned this as if it was a vastly more memorable hardship than that ofttimes he could get nothing more than dry bread for his family to eat It was a common thing that they had

nothing to eat but dry bread. He got the flour—*fine, white wheaten flour*—from the master. They kept a hog, and had so much bacon as it would make, to provide them with meat for the year. They also had a little potato patch, and he got cheese sometimes from the master. He had tea, too, to his supper. The parish gave him his rent and he never was called upon for tithes, taxes, or any such thing. In addition to his wages, the master gave him, as he did all the labourers, three quarts either of cider or beer a-day, sometimes one and sometimes the other. He liked cider best—thought there was "more strength in it." Harvest time they got six quarts, and sometimes, when the work was very hard, he had had *ten quarts*

"He had heard of America and Australia as countries that poor folks went to;—he did not well know why, but supposed wages were higher, and they could live cheaper. His master and other gentlemen had told him about those places, and the laboring people talked about them among themselves. They had talked to him about going there. (America and Australia were all one—two names for the same place, for all that he knew.) He thought his master or *the parish* would provide him with the means of going, if he wanted them to. We advised him to emigrate then, by all means, not so much for himself as for his children,—the idea of his bringing seven, or it might yet be a dozen, more beings into the world to live such dumb-beast lives, was horrible to us. I told him that in America his children could go to school, and learn to read and write and to enjoy the revelation of God; and as they grew up they would improve their position, and might be land-owners and farmers themselves, as well off as his master; and he would have nothing to pay, or at most but a trifle that he could gratefully spare, to have them as well educated as the master's son was being here; that where I came from, the farmers would be glad to give a man like him, who could "plough and sow and reap and mow as well as any other in the parish," eighteen shillings a-week—

"And how much beer?"

"None at all!"

"None at all? ha, ha! *he'd* not go then—you'd not catch him workin withouten his drink. No, no! a man 'ould die off soon that gait."

It was in vain that we offered fresh meat as an offset to the beer. There was "strength," he admitted, in beef, but it was wholly incredible that a man could *work on it*. A workingman must have *zider* or beer,—there was no use to argue

against that. That "Jesus Christ came into the world to save sinners," and that "work without beer is death" was the alpha and omega of his faith.

The labourers in this part of England (Hereford, Monmouth, Gloucester, and Wiltshire,) were the most degraded, poor, stupid, brutal, and licentious, that we saw in the kingdom. We were told that they were of the purest Saxon blood, as was indeed indicated by the frequency of blue eyes and light hair among them. But I did not see in Ireland or in Germany, or in France, nor did I ever see among our negroes or Indians, or among the Chinese or Malays, men whose tastes were such mere instincts, or whose purpose of life and whose mode of life was so low, so like that of *domestic animals* altogether, as these farm labourers.

I was greatly pained, mortified, ashamed of old mother England, in acknowledging this; and the more so that I found so few Englishmen that realized it, or who, realizing it, seemed to feel that any one but God, with his laws of population and trade, was at all accountable for it. Even a most intelligent and distinguished Radical, when I alluded to this element as a part of the *character* of the country, in replying to certain very favourable comparisons he had been making of England with other countries, said—"We are not used to regard that class in forming a judgment of national character." And yet I suppose that class is larger in numbers than any other in the community of England. Many have even dared to think that, in the mysterious decrees of Providence, this balance of degradation and supine misery is essential to the continuance of the greatness, prosperity, and elevated character of the country,—as if it were not indeed a part of the country.

A minister of the Gospel, of high repute in London, and whose sermons are reprinted and often *repeated* in America, from the words of Christ, "the poor ye have always among you," argued lately that all legislation or co-operative benevolence that had the tendency and hope of bringing about such a state of things, that a large part of every nation should be independent of the *charity* of the other part, was heretical and blasphemous. Closely allied to such ideas are the too common notions of *rulers* and *subjects*.

With regard to the habits of drinking and the customary diet of those, by whose labour England is mainly supplied with food, I fear my statements may be incredible to Americans; I therefore quote from authority that should be better informed

A correspondent of the Agricultural Gazette mentions, that in

Herefordshire and Worcestershire, the allowance of cider given to labourers, in addition to wages, is "one to *ten gallons* a day." He observes that, of course, men cannot work without some drinks, but that they often drink more than is probably of any advantage to them, and suggests that an allowance of money be given instead of cider, and the labourers be made to buy their drink. In this way, he thinks, they would not be likely to drink more than they needed, and it would be an economical operation for both parties. In Normandy, the cider district of France, three gallons a-day is the usual allowance of labourers.

"The usual allowance given in Herefordshire by masters, is three quarts a day; and in harvest-time many labourers drink in a day, ten or twelve quarts of a liquor that in a stranger's mouth would be mistaken for vinegar."—*Johnson and Errington on the Apple.*

It would be unjust not to add, that in a large part of England the laborers are much more comfortable than these statements might indicate. I am also convinced that the condition of the labourer generally is *improving*, and that he is now in a much less famishing condition than ten years ago. The main stay of the laborer's stomach is fine, white, wheaten bread, of the best possible quality, such as it would be a luxury to get any where else in the world, and, such as many a New-England farmer never tasted, and even if his wife were able to make it, would think an extravagance to be ordinarily upon his table. No doubt a coarser bread would be more wholesome, but it is one of the strongest prejudices of the English peasant, that brown bread is not fit for human beings. In Scotland and Ireland, and in some hilly districts of England, only, wheat bread is displaced by more wholesome and economical preparations from oatmeal.

With regard to fresh meat, a farmer once said to me, "They will hardly taste it all their lives, except, it may be, once a year, at a fair, when they'll go to the cook-shops and stuff themselves with all they'll hold of it; and if you could see them, you'd say they did not know what it was or what was to be done with it,—cutting it into great mouthfuls, and gobbling it down without any chewing, like as a fowl does barleycorns, till it chokes him."

The following song, written by EDWIN JOCELYN, was sung at the dinner table, on the day of the Annual Exhibition, at Lawrence:

MOTHER EARTH. TUNE—"*Dearest Mae.*"

O, Mother Earth, once more we've met
Around the plenteous board,
To taste the bounties of thy hand,
With which our barns are stored;—
With manly pride to-day, we bring
The products of thy breast;
No merit for ourselves we claim,
But that of toil's behest.

CHORUS.—O, bounteous Mother!
Thy hand is open free,—
Thy children work on easy terms—
The Crop for Industrie.

Of course, we bring the Courser race,
And every kind of kine,
Nor are we bearded Jews enough,
To kick aside the swine;
And for the belly and the back,
The tribe of woolly fleece,—
And turkeys, hens, and lesser fowls,
And waddling ducks and geese.

And then we spread the golden store
Of butter and of cheese;—
Potatoes, turnips, onions, beets,
And squashes, beans and peas;
Nor shall the pumpkin be forgot—
That fruit of Yankee dish;
In fine, we have, from pot to pie,
All that the heart could wish.

And then of grains,—rye, barley, oats,
And wheat, and golden maize;
And apples, pears, grapes, peaches, plums!
O, these are glorious days!
And all the implements of use,
To better till our lands;

The "fixins," too, of fancy, taste—
From wives' and daughters' hands.

But, farmers, now the time would fail
A catalogue to give;
Sure all who do not till the soil
Do not "begin" to live;—
But, stop—our daughters and our sons—
And then *the* joy of life!
For certainly, each *husband*-man
Has got a loving wife.

But not of eatables, alone,
Our mother gives us free,—
A beverage she keeps in store,
Of any quantitie.
'Tis said, within her secret depths,
She works a constant *Still*,
And sends the "liquor" forth to man,
In ceaseless springs and rill.

A portion too, she sets above,
High on the "upper shelf,"—
And it is proved a "fixed fact,"
She takes a drop herself.
So in the spring, you plain may see
The blossoms on her face,—
Not "toddy blossoms," O, no—no—
We hint no such disgrace.

'Tis "smacking good" to animal,
And vegetable too;
Exhilarating to the head,
And giving strength anew.
The ox so noted for "stiff horn,"
And lift at wheel or raft,
Will guzzle full—then only feel
The stronger for the draught.

She pours it down from sailing cloud,
On all her creatures free;—
The grass gets "high," potatoes "blue,"—
The fruit "gets up a tree."
The "mountain dew," (of Scottish name,)
Each morning, drinks the clover;
The oats will "reel" "top-heavy" got—
The meadows "half-seas over."

Your well ploughed lot, and careful hoed,
With verdant rows adorned,

But soon the "blades" to drinking take,—
And so the field "gets corned."
And e'en your house from abstinence,
Gets dry in leaky plight,
And then it takes a thorough "soak"—
And so the roof gets "tight."

And here we tap the Merrimac,
And from it constant draw,—
So gravitation turns our wheels,
All by the "*liquor law.*"
But we must end our ditty long,
And drink each other's healths;
And since so potent mother's "drops,"
We'll just take "nothing else."

CHORUS.—O, bounteous Mother!
Thou hast a license free;—
Thy children quaff thine own "home brew'd."
A jolly set are we!

# REPORTS, &c.

## INTRODUCTORY REMARKS.

In accordance with the wishes of many of the members of this Society, the experiment was this year made of holding its annual Cattle Show and Fair, during two days. The experiment was completely successful. The Exhibition came off on Wednesday and Thursday, the 29th and 30th of September last, at Lawrence. The first day was appropriated to the examination, by the Committees, of the stock and articles entered for premiums, and the second to the ploughing match, the trial of working oxen, the annual meeting and dinner of the Society, and the award of premiums. The show of animals was continued through both days. The Hall of Exhibition was opened to the public on the evening of Wednesday and

the whole of Thursday. Over seven thousand persons were admitted to the hall, on payment of the sum of ten cents each.

The show of fruits, particularly of apples, was unusually large and fine. Nearly all the new and valuable varieties raised in New England, were exhibited, and at the same time numerous specimens of our native standard varieties, thus giving evidence that our cultivators, though disposed to test new varieties of fruit, are not so captivated by novelties, as to give up the cultivation—and the extensive cultivation, of what has uniformly proved productive and profitable. In the show of vegetables, there was some improvement over former years, but by no means such an improvement as should mark our Exhibitions, nor such as is worthy of the County. We cannot but hope that this department will, at the next annual Fair, receive, as it deserves, the liberal and enthusiastic support of the far-famed market gardeners of Danvers, of Marblehead, of Beverly, and other towns in the County. We fear that, in this respect, we are better known in the Boston market than at home. We fear that half of the County knows not what the other half is doing in the raising of vegetables. We know, —for we have seen their rich acres—that our market gardeners can show onions, and squashes, and cabages, and the different varieties of esculent roots, in quality and quantity per acre, second to none in the State; and we invite them, earnestly, to take an honest pride in these products of their skill and industry, and present each a few baskets full at our next show, for competition and admiration.

The show of neat stock generally, did not quite equal, either in numbers or quality, the expectation of those who know what the County is capable of exhibiting. The severe drought of the past summer, may account in part for the failure in this respect. The show of swine, however, especially the Suffolks, was beyond anything we have seen in the County, for years past.

The ploughing match, both with oxen and with horses, was never more spirited in Essex. Forty teams in all, entered the list of competitors. The work, too, was extremely well performed, and elicited the praise of all who witnessed it. To

encourage a local pride in our towns, in having good working oxen, a premium was offered for the longest and best team exhibited from any town. Only one string of working cattle, however, was exhibited, to compete for this premium, probably for the reason that the object and terms of the offer were not fully understood,—many persons supposing that by "town teams," was meant the teams belonging to a municipal corporation, or its Alms House establishment, instead of a team composed of cattle owned by the farmers of the town.

The weather was uncommonly pleasant during the whole show, and the multitudes that flocked to it, interested, delighted, and, may we not believe? instructed,—afford a renewed evidence of the profits and pleasures of these annual gatherings. Order, sobriety and courtesy marked the day, and without disparagement to other public gatherings, we cannot but think that none has so strong a hold of the popular favor as this, the Farmers' Holiday.

The Society was honored by the presence of President Hitchcock, of Amherst, as a delegate from the State Board of Agriculture.

The address was delivered by Henry K. Oliver, Esq., of Lawrence. MOSES NEWELL, *President.*

ALLEN W. DODGE, *Secretary.*

## ON POULTRY.

The Committee on Poultry, in making up their Report, regret to say, that the Exhibition, as a whole, both as to number and quality of fowls, is not equal to that of last year.

The Committee award the first gratuity, of Five Dollars, to Messrs. S. & O. Southwick, for the best lot of fowls, consisting in part of Spanish, Dorkings, Shanghais, Guilderlands, Irish and English Games, Black Bantams and other varieties, mostly of pure blood. They also exhibited a fine specimen of China Geese.

These gentlemen seem to have sustained their high reputa-

tion as fowl-fanciers and breeders, both in the variety and great purity of their different kinds of stock.

David Manock, of Andover, exhibited the most perfect specimen of Bolton Greys the Committee have ever seen. They award him the second gratuity, of $1 50

Warner W. Tilton, of Haverhill, exhibited a lot of very fine African Bantams, the best fowls of the kind on the field. A gratuity was awarded to him of 1 00

David Merrill, 2d, of Methuen, presented a coop of Golden Polands, which were of good quality, and the Committee award him a gratuity of 1 00

To John Smith, of Methuen, a gratuity was awarded, for his excellent specimen of Cochin Chinas, of 1 00

Henry K. Oliver, of Lawrence, exhibited a lot of good fowls, among them a fine pair of Cochin Chinas, for which, and other good specimens, they award him 1 00

S. Marshall, of Lawrence, offered a pair of Poland Chickens, of good quality; gratuity 50

To T. L. Quimby, of Lawrence, for one pair of Shanghai Chickens 50

To Thomas Hogan, of Andover, for a pair of White Shanghais, very good, 50

To Almanza T. Allen, of Lawrence, for a cross of Guilderland and Native, very good fowls, 50

To P. P. Holt, of Andover, for a pair of Shanghais 50

F. R. Frye, of Methuen, presented a Native Hen with her fine family of *forty chickens*, all hatched this season, in three broods, the last only three days from the egg. For the prolific qualities of this fowl, the Committee award a gratuity of 50

Hobart Clark, of Andover, exhibited a fine brood of Bremen Geese; gratuity 1 00

Geo. W. Boynton, of Georgetown, for a pair of Flemish crested Ducks, 50

Mr. Boynton also exhibited a very superior lot of Fancy Pigeons, consisting of Pouters, Nuns, Barbs, Ruffs, Bald Pates, Carriers, English Carriers, Fan Tails, Trumpeters, Button Heads, Tumblers and Almond

Tumblers. As a whole, it was a beautiful collection, and all, perhaps with a single exception, of the purest blood. The Ruffs and English Carriers were particularly beautiful. The Committee award him 3 00

A. P. Bateman, of Georgetown, also offered a coop of Fancy Pigeons, several varieties, very fine, 1 00

Jacob A. Allen, of Lawrence, presented a specimen of Fancy Doves, consisting of Tumblers, Buff Necks and Fan Tails, very pure and beautiful, 1 00

There was also a fine lot of Turtle Doves on the ground, from J. W. Kimball, of Lawrence, but as they were not regularly entered, the Committee were prevented from awarding any gratuity.

Some of the fowls were not shown to advantage, on account of their limited accommodations, being in coops better adapted for transportation than exhibition, and the Committee would recommend to the Trustees to provide proper coops for future exhibitions, at the expense of the Society.

Your Committee deem it proper to state that they have in their possession the proceedings of a Convention of the feathered races, as reported by a fine old Muscovy Gander, who acted as Secretary of the Convention. It is at the disposal of the Society, and is as follows:

A Convention of the Domestic Poultry, exhibited here at Lawrence, was held in the morning, for the cultivation of the social feelings among the different tribes, and the general promotion of barn-yard interests.

A stately and dignified Cock Turkey was chosen President, who took the Roost amidst the loud and enthusiastic acclamations of the whole Convention.

The organization was completed, by the choice of Mr. Muscovy Gander, for Secretary, and the appointment of Mr. Carrier Pigeon, as Messenger.

After expressing his thanks for the high honor conferred, and congratulating the assembly on the present high position of the Poultry tribes, the PRESIDENT expressed the hope that the present meeting would do much for their further ad-

vancement and respectability, and said he was ready to hear any suggestions tending to promote the objects of the Convention.

Mr. COCHIN CHINA then arose, and said he supposed the best mode of effecting these objects, would be for the members to make known their several wants and grievances, and then leave it to the Convention to provide a remedy. He well knew that they had grievances enough to complain of, and the first and greatest was their deprivation of liberty. He contended that all the races of domestic fowls were originally free to roam over the earth, like pheasants and partridges, selecting their own nests, and caring for their own young, and all he desired was a restoration to their ancient state of freedom.

Mr. GOLDEN POLAND spoke in reply, and said he was not prepared to go on a wild goose chase after liberty, while they already enjoyed more than they knew what to do with. He thought it would better become some fowls to improve their plumage, and present a respectable appearance in society.

Mr. PEACOCK was of the same opinion. He said we could hardly over-estimate the importance of making a good show in the world, but to do this it was absolutely essential to wear long tail-feathers.

Mr. BANTAM remarked that he was as much in favor of a becoming dress, as his friend who had just spoken; but he must dissent from his opinion about long tail-feathers. The only truly graceful garb is the original *Bantam Costume*—a short dress and pantaletts.

A tom pigeon of the POUTER family rose, and addressing the ROOST, asked what all this frivolous talk about dress had to do with the business of the convention? He understood that we had met to consult about our wrongs. He thought the time could not be better employed than by looking after grievances. If we had none of our own, it was always pleasant to enter warmly into those of other people. He had often noticed the oppressions of the man power on the gallinaceous tribes and always with the greatest indignation. But he had one grievance of his own to present. He would like to know the mean-

ing of those pallisades of painted shingles, which were kept bristling about his dove-cot? He knew very well that they were no practical hindrance to his movements, as he could easily fly over them, but they were a *sign* of oppression, and he had too much of the spirit of liberty to endure even the semblance of bondage. [Applause.]

Mr. CHITTAGONG was glad to hear the patriotic sentiments just uttered. Allusion had been made to the oppressions of the man-power on the gallinaceous races. He could relate a case of this unwarrantable oppression. One of his own female companions, a gentle and amiable BOLTON GREY, had been shut up for weeks together, with her thirteen children, in a coop, and all this without pretence of crime. Was not this oppressive and unjust? He believed it was more—it was unconstitutional.

Mr. MUSCOVY DRAKE asked where all these things would end? He said he could relate another aggravated case of false imprisonment. When he was a juvenile duckling, he was arrested by a young urchin, without even the forms of law, and thrown into a water cistern, where he might have remained until his death, had not a friend kindly come forward to *bail him out.* He would like to know the value of the Habeas Corpus and trial by jury, where such things are permitted.

Mr. TURKEY now rose, and wished to address the convention upon the subject of annual mortality among fowls. He said he held the documents under his wing, to prove the alarming fact that the greatest mortality was at the healthiest part of the year! He thonght the only remedy for this great evil, would be to abolish Thanksgiving.

Mr. CAPON suggested that Christmas should be included. He related many facts in proof of the blood-thirsty character of that annual festival, and said that he and his other bachelor friends were always most liable to become its victims. He hoped some plan would be adopted, to strike both those sanguinary days out of existence.

Mr. PLYMOUTH ROCK had long been aware of the evils complained of, and it was a source of great mortification to him to acknowledge that Thanksgiving had its origin at his own lo-

cality. He was, however, pleased to say that its originators had as strong an aversion to the other festival, as any fowl could reasonably desire. He trusted that the day had its origin in good feelings, notwithstanding its lamentable results. He believed it was only a perversion of the original intention of the day, that required such fowl sacrifices.

Mr. DORKING was pleased to hear such kindly feelings expressed towards those unfortunate bipeds who wore no feathers, and hoped we should hear no more jealousy of the manpower. He thought this feeble race deserved the pity and compassion of all philanthropic fowls. They are not only destitute of a natural covering, but depend on us to feather their nests. The best of them have owed their elevation to a goose quill, and they are now unable to crow—except just before an election.

Mr. JAVA avowed himself in favor of reform. He was also a philanthropist and vegetarian, and believed that all creatures that live have a sacred right to life. No one creature had a right to take the life of another. He wished the convention to resolve itself into a Society of Total Abstinence from earthworms and grasshoppers.

Mr. FRIZZLE regarded liberty as more important than life. He hoped the convention would take into consideration those oppressed cage birds, who were singing merrily in their prison houses. He felt the more disposed to interfere in their behalf, because they seemed so unconscious of their own misery and degradation.

Mr. DUNGHILL was astonished to hear such sentiments uttered in this assembly of sovereign tribes of independent Poultry! Was he aware of the tendency of advocating such pretended reforms? He could tell him that the Dunghill tribe believed in the right of secession. He would go farther, and inform the members that if any allusion was made to cage birds, he would manifest his offended dignity by walking out of the convention!

Mr. SWAN replied that there was no such thing as secession from the poultry yard. His friend might walk out of the convention or any where else, but he would still be a Dunghill and amenable to all the ancient rules of the feathered Republic.

Mr. SHAKEBAG was an advocate of female rights. He had expected to see a hen preside over this convention, and geese take a part in the debates. He knew several crowing hens who would greatly enlighten the Convention, if allowed to take part in the discussions. One of these is now present, who has left her young family in charge of her male companion, while she comes here to advocate the rights of female poultry. He hoped she would be permitted to speak. [Disapprobation, and cries of No, No.]

The ROOST, in deciding that the request could not be granted, said there were certain well defined rules of propriety, which were always observed among domestic fowls, and he supposed that all crowing hens and henpecked Roosters belonged to another biped race.

Mr. MALAY said there was another grievance which demanded the attention of the Convention, and one which affected the finest feelings of a fowl's nature. He alluded to the philoprogenitive propensities so strong in all our races. One of his own favorite companions, a beautiful and accomplished Guilderland, in obedience to her natural impulses, sought to provide herself with a family. She accordingly occupied her nest for several weeks, when to her great surprise and astonishment, all her chickens came into the world with webbed feet and spoon bills! He would not attempt to describe her feelings, when she saw them wander away, and plunge into the first puddle of water! She endeavored to recall them from their perilous position, but the most affectionate cluckings and the most appalling wailings were alike unavailing. He would not dwell on this sad case, as he saw by the looks of the members that he was anticipated in the explanation he was about to make, that the strange chickens were only young ducklings. Now the great and important question which he wished the convention to solve was—*Who was the real mother of that young brood*? [Great sensation.]

Mr. BREMEN GANDER was glad to see by the sensation caused by the question of his friend last up, that the convention duly appreciated the importance of the subject. His own mind was made up, that whatever was the form of the animal

which came out of the egg, *she* was the mother whose vital warmth had quickened it into life, and by whose tender assiduities and care it was reared up to the maturity of Poultry. He was willing to appeal to the experience of every one present, to decide the question in his own case. He was proud and grateful to acknowledge that his mother was a Dorking, and he cherished feelings of filial affection towards her, which he could never accord to any Mother Goose in fowldom.

Mr. SUMATRA GAME said the question had its difficulties. It involved the proprietorship of the egg. Does the egg become the property of her, who adopts it for the purpose of incubation? Might not the supposed mother of the young ducklings, be considered as a kind of nurse, or foster-mother to the brood? Then again, if a Dorking may be the mother of a Drake, why may not a Bantam claim maternity of a Turkey? It seemed to him to be a violation of all the proprieties of Poultry life, for a tall and stately Turkey to look down on a diminutive Bantam, and call her *mother*. The subject was a perplexing one and he wanted more light upon it.

Mr. SHANGHAI was surprised to hear such doubts on a question so plain. Who ever heard of a nurse or a mother-in-law among Poultry? Of what value is an egg, without reference to the great purpose of incubation? That affection was natural and not acquired, which led the female fowl to quicken into life her future family, and this affection was just as strong towards other tribes as her own. He never should forget the care and attention he received from his mother, who was a *Shakebag*. He well remembered his brothers and sisters, for all of whom he cherished the most lively fraternal regard.—This affectionate family consisted of one Cochin China, two Dunghills, three Plymouth Rocks, one Shanghai, two Dorkings, a Chittagong, and a Shakebag. It was remarked by all the children that the Shakebag chick received no more attention from its mother, than any others of the family. Was not this ample proof that her affection was as strong for others as for those of her own tribe.

Mr. AYLESBURY DRAKE here arose and said he had listened attentively to what had been said on the subject of natural

affection, and was willing to confess that he was not a believer in the doctrine. For his own part he never felt the least attachment to his own mother. [Here the speaker was interrupted by hisses and cries of "shame," "turn him out," and great confusion ensued. The Roost called upon all the Game Cocks of the assembly to act as special constables and preserve order.] After order had been restored, Mr. Drake proceeded. He said he was not afraid to repeat the same obnoxious expression, which had caused such commotion in the convention. He said he had none of those filial feelings described by others, and he supposed the reason was, that he was a foundling —the orphan child of an egg-hatching machine—and how could it be possible to have natural affection towards a thing of wood and iron, warmed by a steam-boiler and regulated by thermometer? [Intense sensation.]

Mr. Chittagong said the question now appeared in a new aspect and assumed an importance he had not supposed belonged to it. He moved that this and all other subjects before the Convention, be referred to a Committee of one from each tribe, to sit in the recess, and that this committee have power to send for—eggs and chickens.

This proposition was unanimously adopted, and the Convention adjourned without day.

FITCH POOLE, Chairman.

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## SHEEP.

The Committee on Sheep, (being all present except Mr. Kent, and his place being supplied by S. H. Greene, of Ipswich,) proceeded to examine the only specimens offered. These were but two, and were owned by Doctor Joseph Kittredge and Jacob Farnum, both of Andover. The lot of Dr. Kittredge consisted of four pure blood South Downs, and three others of a large variety of long woolled Sheep. They were all young, and were a part of a flock of twenty.

A noble animal of the Leicester breed, was noticed in the pen, by one of the Committee, after the official examination,

which, of course, the Report cannot further notice, especially as no description was furnished by the owner.

The Committee award the first premium, of six dollars, to Dr. Joseph Kittredge.

The other lot was owned by Jacob Farnum, and consisted of twelve in number, a part being lambs, but intended to be kept for breeding. The sixteen lambs were very handsome.

The Committee award to Mr. Farnum, the second premium, of five dollars.

In coming to the above result, the Committee have not lost sight of the principle that premiums shall not be awarded as *matter of course.* It would have been fully within our province, we believe, to have reported that either or both have been unworthy of a premium, if such had been the fact. Such, however, is not the fact. The sheep of Dr. Kittredge, and the lambs, or young sheep, as they may be called, of Mr. Farnum, are of good quality, and both gentlemen are evidently disposed still further to improve their own sheep, and afford the facility for enabling others to improve theirs.

Whatever may be said of sheep raising in the hands of other people, it cannot be an unprofitable business with Dr. Kittredge, even in Essex county, where it receives, comparatively, so little attention. One of his sheep had her *second* lamb of this season with her in the pen, the *first* having been sold to the butcher for five dollars. In short, the quality of the Doctor's flock is such that he was offered $3.75 each for seventeen of his lambs; 5 dollars each for four of them, and 4 dollars for ten.

Dr. K. gives his *sheep* no grain, but the lambs as much meal as they will eat. His preference is for the largest Leicester sheep, and the pure South Down buck.

In conclusion, the Committee cannot but say they are impressed painfully with the fact that so little attention is paid to sheep husbandry in our County. They are also painfully struck with the idea, that of the 5000 sheep in the County, there should have been the representatives of two little flocks only. We hope for better things next year. But few of our farmers, it is true, can, like Mr. Jewett, of Middlebury, Ver-

mont, expend $30,000 for French sheep, even if they should shear 20 pounds of wool apiece, like his; but every one who keeps a cow or two, may keep sheep enough for the stocking yarn of himself and his family. For, according to the idea of the late lamented Asa T. Newhall, every pasture will carry as many sheep as it now does cows, in addition to the cows, without sensible loss to them.

The following letter, received previous to the Show, by the chairman, from Mr. Page, a member of the Committee, is appended to the report, and will be regarded as the most important part of it. DAVID CHOATE, *Chairman.*

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NATHAN PAGE'S LETTER.

DANVERS PORT, 9th Mo., 8th, 1852.

FRIEND CHOATE:—Thy letter of the 31st. ult. was duly received. To thy request for information on Sheep Husbandry I must reply, that I have had no experience in the business in this County or State. Sixteen years ago I kept sheep in the state of Vermont. I will offer some remarks on my method then and there, but cannot promise that they will contain much important information.

For about fourteen years, while living in Addison Co., in that state, I paid some attention to wool-growing. The sweet pastures on the highlands near the mountains are excellent for sheep, and the cold climate is admirably adapted to the growth of the finest wool.

My flocks ranged from full blood Merino to one-quarter Merino and three-quarters Saxony, and vice versa. The greatest number that I owned at any one time was five hundred, not including lambs. In one lot of one hundred acres (including thirty five acres of wood-land,) I pastured three hundred sheep, together with fifteen head of cattle, and four horses. In another pasture I kept one hundred thirty, and hired the remainder kept by the year, for one dollar each. In winter, I separated them into five flocks—the lambs in one,

wethers in another, and the ewes in three. I fed principally with hay, but always used some ruta bagas, English turnips, and a little corn or oats. Those that I hired kept, were fed with good hay and potatoes. I gave hay three times a day—usually dropping it on clean snow a few rods from the sheds, or barn. If sheep feed from a rack, they wear the wool from their neck, and fill their fleeces with the hay seed; if hay is given under sheds or in the yard, they tread it in the dirt, and waste it.

Open sheds are sufficient protection for flocks in winter. Confined air, and crowding in close quarters, are each highly injurious. In spring, I always had my sheep *tagged* before turning to pasture. By this practice, wool is saved, the fleece is kept clean, and the sheep in a more thriving condition. After washing thoroughly in running water, I let them run seven or eight days before shearing, that the wool might become a little softened with oil. Manufacturers like it better in that condition, and it weighs more. A flock of four or five hundred half blood Merinos usually averaged three pounds of clear wool to the clip—sometimes a little more. A flock of wethers only, average about five pounds each. Prices of wool, of that quality, ranged from forty to fifty cents; I have sold some of the finest Saxony at seventy-five cents per pound. Wethers I sold at three years of age to drovers—price, two dollars each. They are seldom fit to sell at three years, and after three years, they shear less wool. Farmers allow that seven or eight sheep require an amount of food equal to one cow. I kept ten cows, and the *labor* attending their keeping, was, every year, equal to that required by five hundred sheep.

Cows there, yield richer milk, and a much greater quantity, than here. Many large dairies are kept in that county, and with some profit; but the profits of wool-growing were much greater. I have not time now, to give illustrations of this. Hay was worth there eight to ten dollars per ton.

In regard to sheep husbandry in this county, I can only give an opinion; let it pass for what it is worth.

I do *not* think that *wool-growing* can be generally profitable

here. The price of land is too high for pasturage, the feed is not often suitable, hay costs too much, and western farmers can grow wool to an almost unlimited extent, for one-third of the cost to us, and get it to our markets almost as readily as we. *Sheep-raising*, I think, can be made profitable. The price of fat lambs in our markets, is always very high, and so also is the *extra quality of mutton*. To supply the demand for these, should be the *first* aim in sheep husbandry, here, and the *next*, to get valuable wool. Sheep of good fattening properties should be chosen. Probably some of the large kinds will be most profitable. The *weight of the carcass* is an important item, and a heavy fleece of coarse wool, if of a long, soft, and free working staple, will give better returns than a light, fine fleece. The extra keeping given to sheep to fit them for market, largely increases the weight of the wool. A flock should never be fed with poor hay, early in winter, however good may be their condition. It is too expensive. They become poor, cannot bear the cold so well, and if you give them corn, then, it induces fever, and is of no benefit. With good hay, and ruta bagas, or other roots, sheep will winter in fine condition; and that is the only condition profitable. For pasturage, nearly all of the finer grasses will do. White clover is best; and the sheep manure on the land, and close feeding, will bring it in—so also will wood ashes and gypsum. Sheep bite very close to the turf, hence many infer that they injure pastures; but this is not true.

Experience has taught wool growers that no course of culture will improve a pasture more rapidly than feeding it with sheep. It may be well to remark that they will effectually destroy raspberry bushes and briers, if pastured among them in Spring and Summer.

In closing, I will express the opinion (not now giving my reasons in detail,) that where young cattle can be kept in Essex county with a profit of *one per cent*, and cows, kept for butter, yield *six per cent*, sheep will as readily give *ten per cent* profit. Respectfully thine,

NATHAN PAGE.

## SWINE.

The entries for premium, this year, have been more numerous than in years past,—a fine exhibition of pigs and porkers has been made in Old Essex. There was diversity of size, not to say of form and feature, and the musical sounds from the various enclosures, were of every variety of intonation, from the shrill squeal of early infancy, to the grum grunt of mature hoghood; and your Committee feel that they would do marked injustice to the *Swinish judgment* of the competitors for the premiums, should they speak in other than terms of praise of all the delegates from hogdom, to which they were introduced.

There were seven boars offered for premium, all of which were very fine animals, to any two of which the committee would cheerfully have awarded the prizes of the Society, had not others of superior qualities, in their judgment, been offered.

The Committee award to Ezra B. Welch, of Haverhill, the first premium, for the best boar, of $5 00

To Charles Rowell, of Salisbury, the second premium, of 3 00

E. Chase, of Amesbury; Josiah Crosby, of Andover; Benjamin Atkinson, of Amesbury; and F. Boyden, of Topsfield, each presented fine specimens of boars,—and your Committee believe that animals of less worth have not unfrequently, heretofore, received the prizes of the Society.

William H. Balch, of Topsfield, presented a boar pig of the Suffolk breed, the most beautiful animal upon the ground, and the Committee regret that they do not have it in their power to award him a premium.

There were seven breeding sows offered for premiums.

William G. Lake, of Topsfield, presented three female pigs, for the prizes offered for breeding sows, but your committee, in consideration of their youth, and inexperience in the performance of matronly duties, could not seriously consider them competitors for those prizes, and they hope the young females will not take offence at this report.

William Poor, of Andover, offered a native sow, with a very fine litter of nine pigs.

The Comittee award to Josiah Crosby, of Andover, for the best breeding sow, the first prize, of $5 00

To F. Boyden, of Topsfield, for the second best, a premium of 3 00

There were four competitors for the prizes offered for the best litter of pigs, not less than four.

James Stevens, of Andover, presented four weaned pigs, five and a half months old, which were beautiful animals

Charles Rowell, of Salisbury, offered four weaned pigs, which, from their beauty and apparent excellence, ought to, and would, against any common competition, receive the highest prize.

Henry A. Gould, of Andover, presented four swine, which caused much trouble to the committee. The question is, at what period in the life of swine, do pighood and hoghood commence? The said swine, as your committee were informed, were born on the 31st of March last, at 4 o'clock in the afternoon. They presented, in their appearance, marks of unusual maturity for animals of the age the day of their birth would seem to indicate. Your committee finally determined that it would be improper for them to attempt to go behind the information they had received, and although these swine, from their size and appearance, seemed to have arrived at the age of mature hoghood, the committee award to Henry A. Gould, for the best litter of weaned pigs not less than four, from two to six months old, a premium of 6 00

To William H. Balch, of Topsfield, for the second best a premium of 3 00

There were several fine specimens of swine offered for show, not for premium, whose owners are entitled to the thanks of the Society for the trouble they have taken to add to the interest of the exhibition.

William Swan, of Lawrence, offered a very fine boar pig.

J. C. Hoadly, of Lawrence, presented a Suffolk pig of fine form,—none better on exhibition, of his age.

Simeon Bardwell, of Andover, showed to the committee two

pigs out of a litter of nineteen, five months old, of the Suffolk and Chester breed, which satisfied the Committee that his breed of pigs is not often excelled.

N. W. HARMON, Chairman.

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## STALLIONS.

The Committee on Stallions report that there were four Stallions offered for premium, in the name of the following persons, viz:

One by Seth Kimball, of Bradford, six years old; one by Josiah Crosby, of Andover, four years old; two Arabian Stallions, by Joseph S. Leavitt, of Salem.

There were also presented to the notice of the committee, two splendid draught horses, weighing about fifteen hundred pounds each, belonging to the Atlantic and the Bay State Cotton Mill Company.

Also, a very fine black draught horse, weighing about thirteen hundred pounds, owned by Wilson & Allen, of Lawrence.

Upon deliberation, the committee have agreed to award to Seth Kimball of Bradford, for his light chesnut-colored horse, the first premium, of $20 00

To Josiah Crosby, of Andover, for his dark chestnut-colored Stallion, the second premium, of 10 00

For the Committee, JOHN ALLEY, 3d.

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## MARES.

The Committee on Breeding Mares, report as follows:

The number entered for premium, was six. Five only, were found in the pens. One of that number did not come within the rule of the society, not having a foal with her. The four to which the committee gave their attention, were entered by Nathaniel Stevens and Asa A. Abbot, of Andover, Jesse Smith, of Haverhill, and Horace Ware, of Marblehead. The first

three had the appearance and reputation of having been valuable animals, but all were considered unsound. The committee were unanimous in the opinion that no unsound mare should be recommended as a breeder. There was some difference of opinion in the minds of the committee, whether the blemishes in Mr. Smith's mare were such, as to materially injure her as a breeder. But after a careful examination and interchange of opinions, they decided that no one was entitled to a premium. Mr. Ware's mare was young and sound, but the committee could not discover those decidedly superior qualities in her, to entitle him to a premium.

The committee have to regret that they did not feel at liberty to award either of the premiums at their disposal.

Respectfully submitted, for the Committee,

DEAN ROBINSON, Chairman.

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## COLTS.

The Committee on Colts, award the following premiums:

For the best four-years old Colt, to Royal A. Merriam, of Topsfield, first premium, $6 00

For the best three-years old Colt, to Isaac Stevens, of Andover, first premium, 5 00

For the second best three-years old Colt, to Josiah Crosby, of Andover, second premium, 3 00

For the best two-years old Colt, to Seth Kimball, of Bradford, first premium, 4 00

For the second best two-years old Colt, to E. C. Brooks, of Lawrence, second premium, 2 00

For the best yearling colt, to Nathaniel Stevens, of Andover, first premium, 3 00

For the second best yearling colt, to J. & J. E. Foster, of Boxford, second premium, 1 00

The exhibition of Colts was remarkably good. The number was much larger than on any of the previous years, and although the committee were unable to award any more prem-

iums, yet there were many other colts which deserve much credit. And it is gratifying to see that the increased number and superiority which are exhibited from year to year, indicate that there is an increasing interest taken in the rearing of this favorite and valuable animal.

WILLIAM OSBORN, for the Committee.

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## WORKING OXEN.

The Committee on Working Oxen report that twenty-seven pair were entered for premium, but fourteen pair appeared on the ground, the most of which did their work very well.

There were several pairs present that the Committee noticed as being very fine cattle, which did not receive a premium, as the Committee thought they were not so well trained as others of less marked appearance. The cattle of Franklin Alley, of Marblehead, were amongst those that the Committee thought were a credit to the show, and to the owner; and Joseph Hathaway's, also of Marblehead, were remarkably fine cattle. But the twin cattle of Wm. F. Porter, of Bradford, were the best appearing and drawing cattle on the ground, and were, in the minds of the Committee, awarded the first premium; but when they tried their power in backing, the Committee found that they had not been trained to it, which is a very important point, and therefore did not come up to the requirements of the Society.

They award to Frederick Symonds, of Andover, a gratuity of $10 00

To J. Longfellow, of Byfield, the second premium of 8 00

To Gayton P. Osgood, of Andover, the third pre'm. of 6 00

To. Wm. Foster, of Andover, the fourth premium of 4 00

HORACE WARE, Jr., for the Committee.

## TEAMS OF WORKING OXEN,

FROM ANY TOWN IN THE COUNTY.

The committee on teams of Working Oxen, report that one team only, of the description contemplated in the offer of the premium, was present at the Show. This consisted of thirty-six pair of cattle from Andover. About half of these were the same that had been seen, in the ploughing and drawing. As a whole, it was a fair team, such as might readily be gathered in most towns of the County. The committee regretted that other teams had not come in from Lawrence, Methuen, Haverhill, West Newbury and Danvers, where they know fine teams could readily be collected, and where, they have reason to believe, the farmers feel an interest in advancing the purposes of the Society. Without such a feeling, it is clear that premiums may as well be given for any drove of cattle that may chance to be on the road.

As this was the first instance of the offer of a premium of this class, in this County, the committee are disposed to waive the application of the rule, that requires "all objects for which premiums are given, to be of decidedly superior quality," and to reward the exertions of the farmers of Andover, who presented the team at the Show, by the payment for their use of the first premium, of $20. For the Committee,

Sept. 29, 1852. RICHARD P. WATERS.

## STEERS.

The Committee have attended to the duty assigned them, and report that there were five pair of three-years old steers entered for premium, (one pair of which were withdrawn, having been entered for another premium) and four pair two-years old, and six pair yearlings.

On three years old Steers, the committee award to James Day, of Haverhill, the first premium $7 00

To David S. Caldwell, of Byfield, the second premium 6 00

The pair entered by Simeon Bardwell, of Andover, were very handsome, color a dark red, though considerably smaller than those to which the premiums were awarded. The committee would be very much gratified to recommend a handsome gratuity to Mr. Bardwell, had the rules of the Society permitted it.

On Steers two years old, the committee award:

To William Tucker, of Andover, the first premium $5 00

To Jacob Farnum, " " the second premium 4 00

On yearlings the committee award:

To Gayton P. Osgood, of Andover, the first premium 4 00

The second premium on yearlings, the committee had some difficulty in deciding, as three or four pair were so near alike, that they would have given each a premium, had it been in their power to have done so; but after much examination, they award to Joseph Kittredge, of Andover, the second premium 3 00

James Abbot, of Andover, presented for exhibition only, several very handsome steer calves.

The committee were very much gratified to witness an increased interest among the farmers of Old Essex, in the raising of young stock, believing as they do, that it is for their interest to do so, rather than to buy from the droves, although perhaps the first cost may be somewhat more, yet in the end they think the stock will be so much better as to pay all extra cost and trouble; thus following the advice of our first President, the venerable TIMOTHY PICKERING, who remarked, on one occasion, "Raise and improve your own Stock, rather than buy from the droves, even if it should cost twice as much."

DANIEL ADAMS, Chairman.

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## FAT CATTLE.

The Committee on Fat Cattle, report that there were four pair entered for premium.

They award to Joseph Hathaway, of Marblehead, for his best ox, the first premium, of $10 00

To Edmund Barker, of Andover, for his best ox, the second premium of 8 00

To Joseph Hathaway, of Marblehead, for his second best ox, the third premium of 5 00

ENOCH WOOD, Chairman.

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## BULLS.

The exhibition of Bulls was very creditable to the county, and more premiums would have been awarded, if the Committee had them at their disposal.

The entries were nine in number, eight for premium, and one for exhibition only.

The bull for exhibition was from Tewksbury, owned by Charles E. Abbott and H. C. Merriam, and was a noble animal.

The bull by David Nevens, the Committee thought would have been entitled to the second premium, if any one had been present to make a representation of the animal.

The Committee have awarded the first premium to Eustis Kimball, of Bradford, for his native and Durham bull, three years old, $7 00

The second premium to Jedediah Farnham, of Andover, for his bull, 16 1-2 months old, 6 00

The third premium to William Carlton, of Andover, for his bull, half native and half Devon, 5 00

For the Committee, R. A. MERRIAM.

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## HEIFERS.

The Committee on Heifers report that they found for exhibition, six heifers in milk, and nineteen two years old, and yearlings. Among these the Committee noticed two of good appearance, which were owned by H. C. Merriam, of the neighboring county of Middlesex. All the others, with one exception, were entered for premium. Several of them were

quite superior animals; yet among some of these the Committee noticed some coarse points, indicating the necessity of more systematic care in breeding.

Your Committee recommend that the Society's premiums be awarded as follows:—

For heifers in milk—

The first premium to Josiah Crosby, of Andover, for his two year old Devon and Ayrshire, $7 00

The second premium to Joseph Kittredge, of Andover, for his two year old half Devon, sired by this Society's Ayrshire bull, 6 00

No other animal of this class was considered worthy of premium, except Josiah Crosby's three year old heifer, for which your second premium was awarded last year; and she, of course, is excluded by the rules of the Society, from any other than the first premium.

For two year old heifers—

The first premium to Wm. H. Goodwin, of Marblehead, $5 00

The second, to James Stevens, of Andover, for his native red heifer, 4 00

The third to Isaac B. Cobb, of Methuen, for his native black heifer, 3 00

For yearling heifers—

The first premium to Joseph Howe, of Methuen, for his native heifer, $4 00

The second to J. Jones, of Methuen, for his Durham, 3 00

The third to the town of Haverhill, for their native twins, 2 00

Two heifer calves also were exhibited, one five months old, of Durham blood, belonging to Thomas G. Dodge, of Newburyport; a fine animal, but evidently of forced growth. The other, owned by John Graves, of Methuen, of native stock, in commonly good condition, but of quite promising appearance.

JOHN KEELY, Chairman.

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JOSIAH CROSBY'S STATEMENT.

I offer for premium, my two year old heifer, of Devon and

Ayrshire blood. She calved in May, and in July her milk was measured for one week, which averaged fourteen and one half quarts per day, and on the following week she made seven and one quarter lbs. of butter. She has been kept in a fair pasture, and been fed with green corn fodder, but has never had any grain, or any other extra feed.

I also offer for premium, my three year old heifer, of Devon and Ayrshire blood. She has had two calves, the last of which she dropped in May. She has been fed like the other heifer, and was milked till within fourteen days of calving. Her milk was measured for one week, which averaged fifteen and one half quarts per day, and in six days she made seven lbs. of butter. Respectfully,

NORTH ANDOVER, Sept. 29, 1852. J. CROSBY.

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JOSEPH KITTREDGE'S STATEMENT.

I offer for premium, as heifers in milk, 2 two-years old heifers; one, half Ayrshire, the other, half Devon. The Ayrshire calved about the first of May. As I had no expectation of her calving so early in the season, she was wintered the past winter on poor fodder, and was quite lean in flesh when she calved; since which time she has had nothing but pasture feed, a mile and a half from home. Her milk was weighed and measured occasionally in June, and she gave about twelve quarts a day. She is now, (27th Sept.) giving about seven quarts a day.

Had I intended earlier to offer her for premium, I would have made a more definite statement. She is a calf got by the Ayrshire bull presented to the Society by the State Agricultural Society, which has been so very *severely criticised* at former exhibitions, and has been considered unworthy of the attention of the Society.

The Devon calved in August, and is now giving eight quarts of milk a day. They have had no fall feed.

Respectfully,

ANDOVER, Sept. 27, 1852. JOSEPH KITTREDGE.

## MILCH COWS.

The Committee on Milch Cows submit the following report:

That there were six entries; five Cows only came under the notice of the committee, and one of those examined, had no statement of her products accompanying the entry. The committee are of opinion that better cows have been exhibited at former Shows; still, many of them are considered of good quality.

The committee would remark, that the statement of the produce, in some cases, is for a short period; and in some instances the record of the produce is for former years, and not for the past season.

The cow entered in the name of Edmund Dorr, of Salem, judging from the report made of her products, may be of superior excellence, but after a thorough search among the stock, Mr. Dorr's cow was not found, nor any one to account for her.

No statement of the produce of the cow entered in the name of Isaac B. Cobb, of Methuen, came to the hands of the committee, and no one appeared, at the time of the examination, to give any information in relation to her. She was a black lined back cow, apparently old, and exhibited signs of being a good milker.

The cow presented by James Day, of Haverhill, is reported to be seven years old, and to average sixteen quarts of milk per day during the month of June, and that there was made from her milk, from June 1st to July 10th, a period of forty days, sixty-three and a half pounds of butter, being a little more than a pound and a half per day, and requiring about ten quarts of milk to produce one pound of butter. From July 10th to Sept. 25th, eighty-nine and a half pounds of butter was made from her milk, being about one and one-sixteenth pounds per day. Up to the 15th of August she was kept in an old pasture; since that time she has been fed, morning and evening, with green corn.

Mrs. Charles H. Bigelow presents a cow, said to be ten years old. She is reported to have produced 127 lbs. 3 oz. of but-

ter, from May 21st, to January 10th following, besides two quarts of milk daily, reserved for family use. This, of course, must have been the produce of last year. No intimation is given in the statement, for any portion of the time since January last. And therefore, in the opinion of the Committee, this cow ought not to be considered a competitor for the premiums offered this year.

The Cow presented by James Poor, of Andover, is reported eight years old, and to give milk of excellent quality. She is said to have made in 1849, in ten months, two hundred and fifty-five pounds of butter. During the months of January, February, March, and April last past, there was made from her milk eighty-three pounds of butter; she had, during the winter, in addition to hay, only four bushels of shorts. We consider this an extraordinary yield, considering her feed, and also considering that she dropped her last calf in May last.

She is reported to have made, in the best of the season, ten to twelve pounds of butter per week, and to have given at that time, about twenty quarts of milk per day. If that is so, the Committee do not consider her milk of superior quality, as upon that estimate it requires about fourteen quarts of her milk to produce a pound of butter.

She is reported now to give from twenty-seven to thirty pounds of milk daily. The Committee regret that the statement of the amount of her produce during the summer, had not been as accurately kept as it was for the four months of the last winter and spring.

Josiah Crosby, of Andover, presented a Cow three fourths Ayrshire blood, and from his statement it appears that, during one week, she gave sixteen and one half quarts of milk per day, and that the week following, her milk made eight and one quarter pounds of butter.

We learn from him that this was in the month of June. She is reported to give milk up to the time of calving. She is a cow of fine appearance, and probably a valuable animal, and especially to any one keeping a single cow, as she gives milk all the year, upon hay and grass feed alone.

After a careful examination of the several animals, and the

statements of their produce, the Committee have agreed to award to James Day, of Haverhill, the second premium of $9 00

To James Poor, of Andover, the third premium of 8 00

To Josiah Crosby of Andover, the fourth do do 7 00

MOSES NEWELL, Chairman.

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JAMES DAY'S STATEMENT.

I offer for premium, my cow, of native breed, seven years old. She calved on the 7th of April last, and the calf was taken from her on the 15th of May. It weighed 115 lbs.

During the month of June, she gave, upon an average, sixteen quarts of milk per day. She made, from June first, to July tenth, 63 1-2 lbs. of butter, and one week in the time she made 12 3-4 lbs. butter. Since that time she has made 89 1-2 lbs. butter, up to Sept. 25th. She has been kept during the season, in an old pasture, and has had no other feed of any kind, until the 15th of August; she was then fed morning and evening, with green corn. JAMES DAY.

HAVERHILL, Sept. 28, 1852.

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JAMES POOR'S STATEMENT.

The Fountain Cow, herewith presented, had a calf at three years old. She has never dried since. She is now eight years old. We churn every week and fortnight the year round. Her milk and butter is of a very excellent quality. She will overrun 300 lbs. of butter, annually. In 1849, we weighed her butter ten months. It weighed 255 lbs.; she then had another calf; she has had a calf every year.

This year, she made, during the month of January, 22 lbs. 6 oz.; February, 19 lbs.; March, 18 1-4 lbs.; April, 23 1-2 lbs.; besides averaging a quart of milk a day, in the family. Through the best of the season, 10 to 11 lbs per week.

Her keeping is common pasturing; no fresh feed in the fall. During the winter, she had six bags of shorts.

Sept. 28, I weighed her night's milk. It weighed 16 1-2 lbs., and measured 6 quarts, 1 1-2 pints. Average weight now, 28 to 30 lbs. per day. JAMES POOR.

NORTH ANDOVER, Sept. 29, 1852.

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JOSIAH CROSBY'S STATEMENT.

I offer for premium, a cow raised upon my farm. She is nine years old, and is about three quarters of Ayrshire blood. She calved in June last, and was milked up to the time of calving, without any other feed than hay. She has had no kind of grain for the last year. During the past summer she has been kept in a fair pasture, and during the severe drought was fed with corn-stalks. We measured her milk for one week, which averaged 16 1-2 quarts per day, and on the following week she made 8 1-4 lbs. of butter.

JOSIAH CROSBY.

NORTH ANDOVER, Sept. 29, 1852.

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## PLOUGHING WITH SINGLE TEAMS.

The Committee on Ploughing with Single Teams, offer the following report :

There were eleven teams entered ; but nine only appeared upon the field. The land was somewhat uneven in its surface, and it was more difficult to determine the comparative merits of the different teams, than it would have been upon a level surface.

The Committee after making all due allowance for the difference in the lands, award the first premium, of seven dollars, to Nathan Tapley, of Danvers, work done by Doe's plough, of Concord, N. H. in thirty-six minutes, with twenty furrows.

This plough was somewhat different in its construction, from any upon the field, and had a rolling cutter attached to it. The Committee, while they would be proud of the world-wide fame which the ploughs of our own state have ac-

quired, are glad to see a plough from N. H. which they think is in some respects, superior to any manufactured in this state. If, upon further acquaintance, this plough sustains the favorable impression it has made to-day, we think that it will soon find its way into use among us.

The second premium, of six dollars, to John P. Foster, of Andover, work done by Ruggles, Nourse, & Co., Eagle plough, No. 73 1-2, twenty-three furrows in forty-five minutes.

The third premium, of five dollars, to Daniel Carleton, of Andover, work done by Prouty & Co.'s plough, No. 33.

The fourth premium of four dollars, to Herman Phelps, of Andover, work done by Martin's plough, No. 3, in forty minutes, twenty-two furrows.

The fifth premium, of three dollars, to J. Longfellow, of Byfield, work done by Prouty plough, No. 38, forty-six minutes, twenty-four furrows ; this land was neatly ploughed, except the last furrow, which was not so well turned as some others, but as the ploughman was but a boy, and did the rest of the work so well, the Committee could not withhold the premium.

For the Committee, WM. R. PUTNAM.

## PLOUGHING WITH DOUBLE TEAMS.

The Committee on Ploughing with Double Teams, (Josiah Newhall, Joseph R. Bodwell, Nathaniel Peters, Daniel Adams and Richard P. Jaques,) report: That fifteen teams were entered, which appeared on the ground, and competed for the premiums. The lots of land were drawn as follows, viz:

No. 1, to M. J. Stevens, Andover.
No. 2, to E. S. Parker, Groveland.
No. 3, to Franklin Alley, Marblehead.
No. 4, to David Nevins, Methuen.
No. 5, to John Washburn, Swampscot.
No. 6, to Charles M. Davis, Newbury.
No. 7, to Furber & Reynolds, Andover.
No. 8, to George A. Abbott, Andover.

No. 9, to Richard S. Bray, Newbury.
No. 10, to Wm. Foster, Andover.
No. 11, to Joseph Kittredge, Andover.
No. 12, to Wm. F. Porter, Bradford.
No. 13, to Jacob Farnham, Andover.
No. 14, to J. L. Hubbard, Byfield.
No. 15, to Moses H. Poor, West Newbury.

The teams commenced simultaneously, and the process of inverting the sod went on in a quiet and workmanlike manner, and in about forty-five minutes, several acres were well ploughed. The Committee were pleased to observe so many citizens of the county, willing to exhibit their skill in this important part of the show.

The plough must ever be considered among the most indispensable instruments of husbandry; and the public are under obligation to the distinguished plough-makers of this state, and elsewhere, for that degree of advancement towards perfection, which has been attained. But the skillful use of the plough, has not kept pace with the improvements of the plough itself. Many fields, smooth and without obstruction, may be seen ploughed with furrows deviating from a right line, one or two feet on either side, with the land left uneven, and the furrows of unequal depth. But the Society is doing much towards improvement in this respect, by giving examples of good ploughing.

The Committee, after a careful inspection of the ploughing of the several lots, with but slight difference of opinion, awarded the premiums as follows:—

The first premium to John Washburn, of Lynn; plough, Ruggles, Nourse, Mason & Co.'s— $8 00
Second premium to Moses H. Poor, of West Newbury; plough, Martin's— 7 00
Third premium to Richard S. Bray of Newbury; plough, Prouty & Co.'s— 6 00
Fourth premium to William Foster, of Andover; plough, Doe's, of Concord— 5 00
Fifth premium to David Nevins, of Methuen— 4 00

There were three double ploughs on the field, which attract-

ed attention, but the Committee did not feel it to be their duty to take them into consideration, in awarding the premiums. These ploughs were looked upon with favor by the Committee, but having no practical experience with such, they forbear to express an opinion; but hope that the Society will take measures to test their utility.

The Committee would suggest to the trustees, the propriety of giving a gratuity of five dollars to each of the competitors with these ploughs, all of whom did their work well, viz: to Wm. F. Porter, of Bradford, J. L. Hubbard, of Byfield, and one other competitor, whose name is not recollected by the Committee.

For the Committee, JOSIAH NEWHALL.

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## PLOUGHING WITH HORSE TEAMS.

The special Committee of seven, appointed to award the premiums offered by Charles A. Stetson, Esq., of New York, for the encouragement of the use of Horse Teams, in ploughing, report:

That there were thirteen competitors for these premiums—all of which were promptly on the ground, ready to move at the time appointed. The ground was a gravelly soil, with a fair sod, and occasional fast rocks, that required careful watching of the plough. One sixth of an acre, of like form, was assigned to each competitor, numbered from 1 to 13. Some of the lands were harder and more rocky than others. The directions were, to cut the furrows not less than seven inches deep, and of a width to be most conveniently turned flat. All started at the same time, and completed their work in from forty to fifty minutes;—all having done it within reasonable time, so that the time of performance was not regarded in the award of premiums.

One of the teams was accompanied by a driver—and one of them did not plough so deep as required—these circumstances operated against their performances. Most of the teams were well disciplined, and, with the ploughmen, well prepared for the work. The struggle was fairly contested, and the work

as thoroughly done, as the committee have ever witnessed. Among so many who did well, it was no easy task, to say which did best. Most of the committee were experienced in the management of teams of horses, and were practical ploughmen. Drivers were not forbidden to be used, still, the committee thought, with teams properly trained, there was no necessity for their use. They noticed some of the horses were so thoroughly trained, that they would halt instantly, at the voice of the ploughmen;—so when the plough struck a rock, or wavered from the furrow, it could be instantly reinstated in its proper place. With powerful horses thus trained, and well skilled ploughmen, the best of work can be done in the shortest time.

The "straight line side hill plough," No. 83, made by Ruggles & Co., used by Moses Pettingill, of Topsfield, and held by his son, David Pettingill, all things considered, completed the work in the most satisfactory manner, and richly merited the first premium of $25 00

The work done by Ruggles & Co.'s plough, No. 73 1-2, entered by John Washburn, of Swampscot, merited the second premium of 15 00

The work done by Doe's plough, of Concord, with Mr. Slocum's team, found much favor with the committee. Two other teams, that used No. 73, of Ruggles & Co., did their work in a manner worthy of commendation. Had the committee been so authorized, they would have cheerfully awarded the competitors twice as much, for they never saw premiums better earned.

The committee regret that any combination of circumstances should have prevented the generous donor from being present, to witness the result of the experiments that he had elicited. This is the second time the Society have been under special obligation to Mr. Stetson, for his generosity in advancing the interest of their Show. It only remains for a few more men of public spirit like Mr. Fay and Mr. Stetson, to come forward with just discrimination and liberal hand, and our farmers would show that they can do work that shall be worthy of all admiration.

For the Committee, J. W. PROCTOR, Chairman.

## DAIRY.

The Committee on the Dairy, report that four specimens of June, and nine of September butter, were submitted to their examination, which came within the Society's rules for premium. No specimens of the June butter, in the estimation of the Committee, merited the highest premium; the second, of eight dollars, we awarded to Jonathan Berry, of Middleton, and the third, of six dollars, to Sarah J. Stevens, of Andover.

The September butter was much superior to that of June, and the Committee, after a careful examination, recommend the first premium, of ten dollars be given to Jonathan Berry, of Middleton; the second, of eight dollars, to Caroline J. Ordway, of West Newbury; the third, of six dollars, to Nathaniel Felton, of Danvers.

So nearly equal were some of these specimens, that the Committee carefully compared them before deciding their relative merits.

A specimen of four pounds of June butter, the product of one cow for two days, in June of 1850, was before the Committee; which was of superior quality, and sweet and fresh; which, from the experiment in preservation, we think, entitles the maker. Mrs. Fairfield White, of Lawrence, to the notice of the Society; and we recommend a gratuity of five dollars be given to her.

There were not any specimens of cheese offered.

JOSIAH LITTLE, CHAIRMAN.

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### JONATHAN BERRY'S STATEMENT.

I present for inspection, one pot of June butter, marked No. 1, containing twenty-three pounds, being a sample of two hundred and thirty-six pounds, the product of seven cows and one heifer, from the first of June till the ninth of July. Also seventeen pounds of September butter, marked No. 2, a specimen of six hundred and seventy-two pounds, made from the 20th of May to the 20th of September, from the same cows.

We also made from May 20th to June 20th, one hundred and eighty-eight pounds of four cheese; and from May 20th to July 15th, sold one quart of cream per week; also sold one quart of milk per day during the season, besides what has been used in the family.

Process of Making:—The milk is strained into tin pans, and set in a cellar prepared for that purpose. After remaining from thirty to forty-eight hours, the cream is taken off and kept in a vault until it is churned; we churn once a week; the buttermilk is worked out by hand, and the butter is salted with about one ounce of salt to a pound.

Middleton, Sept. 28th, 1852.

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MRS. SARAH J. STEVENS'S STATEMENT.

I have one cow only, and I present a jar of butter, No. 10, made from her milk. We have used milk for our family, about a quart a day besides making bread twice a week with milk. We have eaten what butter we wanted, besides selling over twelve dollars worth at from twenty to twenty-five cents a pound.

The cow has had no feed except what she has obtained herself on the road, and she has had no particular care, and the latter part of the season, we were very irregular about milking. She averages about twenty pounds of milk a day.

Andover, Sept. 28th, 1852.

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CAROLINE J. ORDWAY'S STATEMENT.

I present for inspection one box of June butter, marked No. 7, containing eighteen pounds, a specimen of seventy-five pounds, made from the 1st of June to the 9th of July, product of two cows. Also two boxes of September butter, marked No. 8, containing ten pounds each, a specimen of sixty pounds, made from the 13th of August, to the 24th of the present month. From the 9th of July, until the 13th of August,

they gave one hundred and seventy-five gallons of milk, appropriated to cheese, with other milk.

The feed of the cows has been common pasture only, until the 15th of August; since then they have been fed once a day with green corn fodder.

Process of Making:—The milk is strained into tin pans, after standing ten minutes in the pails, and placed in a cool cellar; skimmed when slightly changed, into stone jars, the whole cream being stirred as any is added. About twenty-four hours before it is churned, it is set in cold water to cool. Churn once a week. As soon as the butter is formed, it is taken out and salted, with ground rock salt, one ounce and a quarter to a pound. In twenty-four hours, it is placed on a pie board and the buttermilk rolled out; it is then weighed into pound lumps, shaped with clappers, and is fit for market.

Method of Preserving:—A layer of salt is placed in the bottom of an oaken firkin, and a linen cloth laid over it; the butter is then put in and several thicknesses of linen cloth laid over it, covered with salt, and placed in a cool cellar.

West Newbury, Sept. 28th, 1852.

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### NATHANIEL FELTON'S STATEMENT.

I present for examination, twenty pounds of September butter, marked No. 12, being a sample of seven hundred and seventy-nine pounds, made from the milk of seven cows, from the 20th of May, to the 15th of July; after that, of eight cows till the 20th of September, having used milk in the family for eight persons. The cows had common pasture till the 1st of August, and were then fed with corn fodder till the present time.

Process of Making:—The milk is strained into tin pans, and placed in a cool cellar, where it stands from thirty-six to forty-eight hours, when the cream is taken off and put into tin pails and stirred daily. We churn once a week. During the warmest weather, the cream is hung in the well about twelve hours before churning. After the butter comes, the

first thing is to work out the buttermilk, which is done with the hands, without the application of any water, believing it to be of no use. We use about an ounce of the best salt to the pound, varying in some measures according to the state of the butter, to be determined by the taste of the person working it. After standing about an hour, it is worked over the second time and then weighed each pound separately.

WEEKLY ACCOUNT OF THE BUTTER MADE.

| | | | | | |
|---|---|---|---|---|---|
| May | 27th, | 31½ pounds. | Aug. | 12th, | 44 pounds. |
| June | 3d, | 45 do | do | 19th, | 44 do |
| do | 10th, | 46 do | do | 26th, | 45 do |
| do | 17th, | 42 do | Sept. | 2d, | 40 do |
| do | 24th, | 51½ do | do | 9th, | 41 do |
| July | 1st, | 51½ do | do | 16th, | 39 do |
| do | 8th, | 46 do | do | 23d, | 40 do |
| do | 15th, | 45 do | do | 27th, | 20 do |
| do | 22d, | 44½ do | | | |
| do | 29th, | 43½ do | | | 799½ |
| Aug. | 5th, | 42 do | | | |

Danvers, Sept. 28th, 1852.

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MRS. FAIRFIELD WHITE'S STATEMENT.

This butter, No. 4, was made two years ago last June. The cream, from which it was made, was gathered in two days, from the milk of one cow. It has been kept in its present state of preservation by a covering of linen cloth, dipped in lime water, and an additional thickness of flannel.

Lawrence, Sept. 28th, 1852.

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## AGRICULTURAL IMPLEMENTS.

The Committee on Agricultural Implements have attended to their duties and ask leave to report :

That two Ploughs, with straight cutters, were presented for exhibition by Alfred Doe, of Concord, N. H. The pattern, finish, strength, and general appearance of these ploughs compared well with other ploughs of this description. One, No.

8, was of very superior workmanship and finish. It is the same plough which attracted so much attention at the late WORLD'S FAIR in London.

Three breaking up circular cutter ploughs were presented by the same gentleman, which your Committee think are superior ploughs for lands free from rocks, and would prove uncommonly serviceable on swamp or meadow lands, where there are small roots which obstruct the common straight cutters.

The Michigan Plough, exhibited by Prouty & Mears, of Boston, is a good specimen of this kind of plough. And it is well spoken of by most farmers that have used it. It is suggested by some of our best agriculturists, that an improvement can be made by widening the small or top plough to a corresponding width of the under or sub-soil plough, so as to make the after plough turn over the sub-soil, and entirely cover up the turf.

A strong, durable Hay Wagon, with rigging attached, was exhibited by Cyrus K. Ordway, of West Newbury.

Daniel Stiles, of Middleton, exhibited his Hay and Corn Stalk Cutter. The committee were pleased with its operation, especially in cutting corn stalks, and some of your committee intend making trial of this cutter the coming winter, on their own farms.

For the Committee, RICHARD P. WATERS.

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## ROOT CROPS.

The Committee report, that there were statements sent them of two crops of Onions, one crop of Carrots, and one of Potatoes; and they have awarded the premiums as follows:

To Andrew Nichols, of Danvers, for his crop of Onions raised in Middleton, the premium of $6 00

To John S. Hubbard, of Byfield, for his crop of onions, a gratuity of 4 00

To R. P. Waters, of Beverly, for his carrots, the prem. of 6 00

To Charles French, of Andover, for his potatoes, the premium of 6 00

The statements were not received until Nov. 16th, at which time all the crops were harvested, except the Carrot crop of Mr. Waters, so that your committee did not have the pleasure of viewing them in the field; but as the statements are so particular and so well vouched, they had no misgivings about making the awards.

The statement of Mr. French,—concise, but to the point,—your committee commend to the serious attention of all readers, living in the neighborhood of worthless land. He has not only received a fair income from his ground the first year, but his land is now in fine order for any other crop he may wish to put upon it.

The committee have, perhaps, rather exceeded their authority in awarding a gratuity to Mr. Hubbard, but they thought his experiment a very satisfactory one, and such an one as they did not consider advisable to let pass without "material aid" from the society.

For the Committee, J. KITTREDGE.

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ANDREW NICHOLS'S STATEMENT.

The land on which this experiment was made, is nearly level, one corner being a little elevated, and sloping towards the centre of the lot. The subsoil is sand or loose gravel,—the soil a loamy mould, which, as analyzed by Dr. Dana in 1840, contains soluble geine 4.56 per cent, insoluble do. 3.50, Sulphates 1.30, Phosphates .84, Granite sand 89.80. (See Society's Transactions, 1840.) On the larger portion of it, onions had been cultivated for one or more years. On a small portion of it cabbages grew last year. About the middle of April the ground was ploughed seven inches deep, and manured with a compost formed by mixing twelve cart-loads of barn manure with fourteen of muck, of the same kind as that analyzed by Dr. Dana, (see Transactions, 1840,) and thoroughly harrowed, raked smooth, and one and three-fourths pounds of

seed sown thereon. They were weeded four times, twenty-four days labor.

Soon after the first weeding, one bushel of dry wood ashes was sown broadcast over the whole piece. After the second weeding, one bushel of Plaster of Paris was strewn over it in the same manner. After the third weeding, the western end of the piece, on a part of which cabbages grew last year, was less promising as to a crop, than elsewhere. One peck of Guano, mixed with one peck of Plaster of Paris, was scattered over this part of the field, about one-fourth of the whole. This apparently had the desired effect—gave the crop a luxuriant appearance, and at harvest the largest product.

Danvers, Nov. 6, 1852. ANDREW NICHOLS.

This certifies, that, under my own supervision, Dr. Andrew Nichols, on his farm in Middleton, experimenting on one-half acre of land, raised, on seventy square rods, from seed, three hundred and fifty-five bushels of onions; that on the remaining ten square rods, small onions, and a few seed onions were set, and a good crop of what are called rare-ripes, and seed, obtained,—but as there were many of them pulled early for the market, and sold, week after week, in small bunches, it is now impossible for me to say how many bushels, or the equivalent thereto, were produced on these ten rods, but I should estimate the value of this portion of the crop, equal to the average of the whole piece.

Danvers, Nov. 6, 1852. LUKE PUTNAM.

I certify that I measured the ground cultivated as above stated, and found it to contain one-half acre, and no more.

Nov. 9, 1852. J. W. PROCTOR, Surveyor.

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JOHN L. HUBBARD'S STATEMENT.

I herewith transmit a statement of the management of the crop of Onions, entered by me for Premium. The land is a sandy loam, rather light on one side of the piece to a rather deep black soil on the other side, with a southern exposure, containing 86 rods. It has been used for an Onion bed seve-

ral years. The manure was partly barn yard and partly slaughter house manure, was not composted. One side of the lot was manured entirely with the slaughter house manure, and on the other side the barn yard manure was thought to be rather too scattering and some small heaps of the slaughter manure were put in to fill up. The manure was ploughed in, in the Spring. The ground was not harrowed, but it was brushed over, and then raked by hand. The seed was then sown. One pound of the common yellow onion seed was sown first on the lightest part of the land, where the barn yard manure was put; then one pound of Danvers seed entirely on the slaughter manure, and then the lot was finished with a mixed seed of Danvers and yellow onion seed.

The seed was sown the 5th of May. The product was 127 bbls of Danvers, 125 of the common and 47 of the mixed seed. Perhaps, I ought to say that no account was made of the unripe and rotten onions, of which there were several bushels. The product was rather in favor of the mixed seed, but I attribute this to the land, as it was moister and was not molested at all with the worms. The Danvers had the next best chance, and they were ripe some days sooner than the others. There were also taken onions for the use of two families during the summer, and 30 bunches were sold before harvesting. In regard to measure, I say that they were measured in a basket, and that of 100 baskets one basket was taken out and the rest were taken to market and weighed, making 102 bushels and 18 pounds, 57 1-2 pounds being a bushel. If the remainder, which were barreled, overun at the same rate, there would have been over 340 bushels.

EXPENSE OF CROP.

| | |
|---|---|
| Four cords manure | $16 00 |
| Spreading manure and ploughing | 3 00 |
| Fitting the land and sowing | 1 50 |
| Weeding five times | 20 00 |
| Harvesting, topping &c. | 12 00 |
| Hauling to market | 8 50 |
| Interest on land | 3 00 |
| | $64 00 |

| | |
|---|---|
| Crop sold for - - - - | $144 25 |
| From which deduct cost of production, - - | 64 00 |
| Net profit. - - - - - | $80 25 |

Byfield, Nov. 12th, 1852. JOHN L. HUBBARD.

Newbury, Nov. 12th, 1852.—This is to certify that we, the subscribers, have measured a lot of Onions for Mr. Hubbard, of three hundred and thirty bushels.

ADAMS PHALEN.
JOHN S. HILL.

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RICHARD P. WATERS'S STATEMENT.

The crop of carrots which I entered for examination, have now been harvested, and the result is as follows. From one hundred square poles of land I have taken 555 baskets of orange carrots, weighing, on an average, 56 lbs. per basket, amounting to thirty one thousand and eighty pounds of carrots or at the rate of twenty five tons per acre.

The mode of cultivation was as follows. We manured the land with eighteen ox-cart loads of barn yard manure, two thirds of which was swamp muck, and one third pure stable manure composted. This manure was spread and the land ploughed twelve inches deep about the 20th of May. It was then raked with common hand rakes and the seed sown on the 28th of May, the rows eighteen inches apart—with one pound of orange carrot seed. The piece was hoed once and weeded by hand twice. The carrots were harvested on the first week of November, and the crop resulted as above stated. Perhaps it ought to be stated that I took a carrot crop from the same piece of land last year, and for which I received a premium. I shall continue the same crop on the same land another year. The soil is composed of dark and yellow loam, and was fenced off from an old pasture three years since.

EXPENSES OF CULTIVATION.

| | |
|---|---|
| Interest on land, - - - - | $5 00 |
| Six cords compost, - - - - - | 36 00 |

| | |
|---|---|
| Spreading manure, ploughing, harrowing, raking, and sowing seed, | 6 00 |
| Seed, | 1 00 |
| Hoeing, weeding, and harvesting, | 26 50 |
| | $74 50 |

VALUE OF CARROTS.

| | | |
|---|---|---|
| Fifteen and a half tons, at $10, | $155 00 | |
| Tops, as fodder for cows, | 25 00 | |
| | | 180 00 |
| Net profit, | | $105 50 |

In view of this result, I would ask what crop makes better returns than carrots well attended to?

RICHARD P. WATERS.

Cherry Hill Farm, Beverly, Nov. 1852.

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CHARLES FRENCH'S STATEMENT.

I offer one half of an acre of land, in potatoes, for premium. The land a bog, in a wild state, at commencement, and yielding nothing.

| | |
|---|---|
| Cost of digging up, with spade, | $6 00 |
| " " planting, | 13 00 |
| " " hoeing, | 11 00 |
| " " seed, six bushels of black and chenango potatoes, (four bushels black, two of chenangoes,) | 4 67 |
| Cost of manure, (stable manure and sand,) | 15 00 |
| " " digging and housing potatoes, | 10 00 |
| | $59 67 |

The product was, of black potatoes, 117 bushels.
Of chenangoes, 24 "

The chenangoes were dug early, before fully grown or matured.

CHARLES FRENCH.

Andover, Oct. 1852.

## GRAIN CROPS.

The Committee on Grain Crops, report, that there was one entry of Wheat, only, and that by Christopher How, of Methuen, of forty bushels, raised on one acre and eighty-three rods of land, being twenty-six and a half bushels to the acre; and they award him the premium of $6 00

There were two entries of Rye, one by Adino Page, of Danvers, of one hundred and sixty-eight bushels, raised on four and a half acres of land, weighing fifty-eight pounds to the bushel, being thirty-seven and one third bushels, or twenty-one hundred and one third pounds to the acre; and they award him the premium of 6 00

The other entry of Rye, was by James Brown, Jr., of Danvers, of fifty-six bushels, raised on one and three-fourths acres of land, weighing sixty-three pounds to the bushel, being thirty-two bushels, or twenty hundred and sixteen pounds to the acre; and had the committee another premium at their disposal, they would cheerfully have given it to Mr. Brown, considering his extra crop, compared with the condition and value of his land.

There were also two entries of Indian Corn,—one by Wingate Merrill, of Danvers, of eighty-seven bushels, raised on one hundred and sixty-two rods of land, being about eighty-six bushels to the acre; and they award him the premium of $6.

The other entry of Corn, was by Adino Page, of Danvers, of one hundred and forty-three bushels, raised on two acres and twenty-five rods of land, being sixty-six and three tenths bushels to the acre,—a very good crop, but a less quantity than would entitle him to the Society's premium, if more than one were offered.

There was also a crop of Barley entered by Isaac Smith, of Beverly, of sixty bushels, raised on one acre and forty-eight and a half rods of land, being over forty-six bushels to the acre. Mr. Smith's statement not coming up to the requirements of the Society, to entitle him to a premium, the committee, considering his extra crop, recommend that a gratuity of $4 be

given him. His crop of Oats, which he raised on only one hundred and seven rods of land, although an extra crop, being about sixty bushels to the acre, does not entitle him to a premium, as no premiums are offered for grain crops raised on any less quantity of land than one acre.

For the Committee, ANDREW DODGE.

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CHRISTOPHER HOW'S STATEMENT.

I offer for premium, forty bushels of wheat, obtained from one acre and eighty-three rods of land. It is the white flint winter wheat. The land on which it was raised, is a gravelly loam, and has been mowed four years. It was turned over in September, 1851, and thirty loads to the acre of compost manure applied, about thirty-five bushels to the load. It was sown in September, harrowed and rolled.

Methuen, Nov. 8th, 1852. CHRISTOPHER HOW.

This certifies that I surveyed a piece of land for Christopher How, on which he raised wheat the present year, and it contained one acre and eighty-three rods.

JOSEPH S. HOW, Surveyor.

Methuen, Nov. 6th, 1852.

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ADINO PAGE'S STATEMENT.

I offer for premium a crop of winter Rye, grown on the town farm in Danvers. The field on which the rye grew, contains four and one half acres. The soil is light and gravelly. On two acres of this land, rye was grown last year. The other was broke up in the spring of 1850, manured in the hill, and planted with corn, yielding a good crop. In the spring of 1851 it was manured with three and one half cords of hog-yard manure to the acre, ploughed deep and planted with potatoes. After this crop was taken off, it was ploughed DEEP, and harrowed well. On the 22d of September, it was sown with about three pecks of rye to the acre, covered with the harrow, and

rolled. On the 10th and 12th of July last, it was cut with sickles and cradles, dried in the field, and gathered into the barn in good condition, and immediately threshed out. The yield was one hundred and sixty-eight bushels, weighing fifty-eight pounds to the bushel. There was about five tons of straw, which is very nice. The collar makers and onion dealers are buying it for their uses, at sixty and seventy cents per hundred. The grain is worth ninety cents per bushel.

Danvers, Sept. 15th, 1852. ADINO PAGE.

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JAMES BROWN, JR.'S STATEMENT.

I present for your notice, a statement of the culture of a field of winter Rye, in Danvers, in the southerly part of the town, adjoining Boston road. The land is on a plain, light and loamy soil. In 1850 it yielded potatoes; in 1851 one half corn, the other potatoes. About four cords of manure were then applied to the acre. No manure was applied, the present season. It was ploughed in the autumn, about seven inches deep, with one pair of cattle. Two and one eighth bushels of seed were sown on the 1st of October, upon the lot which contains one and three-fourths acres. The produce was fifty-six bushels, weighing, on an average, one hundred and fifty-six pounds to the bag of two bushels, as plump and fair as any grain I have ever seen. No extra effort was made in the culture of the grain, but as the field was uncommonly handsome, I was induced to give this statement. Rye, in my opinion, is one of the easiest and most valuable crops to cultivate on land of this description. JAMES BROWN, JR.

Danvers, Sept. 25th, 1852.

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WINGATE MERRILL'S STATEMENT.

I offer for premium a crop of Indian Corn, grown on one hundred and sixty-two rods of land, the soil good. It was broken up in the fall of 1850. In the spring of 1851 it was

dunged in the hill, and planted with corn, and yielded about seventy bushels. In November last, I put on about four and a half cords of barn manure, and ploughed it in. In the spring it was well harrowed, and planted the 25th and 26th of May, in hills, about three and one-half feet apart. The corn was well cultivated. Weeds were not permitted to grow. It was gathered in October last, and yielded one hundred and seventy-four bushels of sound corn. I estimated the product to be eighty-seven bushels. WINGATE MERRILL.

Danvers, Nov. 11, 1852.

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ADINO PAGE'S STATEMENT.

I offer for premium, a crop of Indian Corn, grown on two acres and twenty-five rods. The soil is shallow and gravelly. In the summer of 1851 we obtained about one ton of poor hay, from this land. The 1st of October following, we put on nine cords of compost manure from our hog-yard, and ploughed it in, seven inches deep. In the spring it was cross ploughed, and well pulverized with the harrow. It was planted the 18th of May, in drills, the stalks standing ten inches apart, the rows four feet apart, and running north and south—the better to admit the rays of the sun. The corn was well cultivated—weeds were not permitted in the field. It was gathered in October last, and yielded two hundred and eighty-six bushels of ears of corn. I estimate the produce to have been one hundred and forty-three bushels of corn.

Danvers, Nov. 6, 1852. ADINO PAGE.

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ISAAC SMITH'S STATEMENT.

I offer for your consideration and for premium, a crop of Barley, of sixty bushels, which I raised on one acre 48 1-2 rods of land, from 2 1-2 bushels of seed. The land was last year to Cabbages, and in a common, ordinary state, and of the value of about fifty dollars per acre.

I also offer a crop of oats for your consideration, of forty

bushels, raised on one hundred and seven rods of land from two bushels of seed; the land in the same condition and of the same value, as that on which the barley grew.

Beverly, Nov. 1st, 1852. ISAAC SMITH.

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## FRUITS.

The Committee on Fruits, report: That in looking back upon the season, it would be difficult to say how the weather could have been made better, for the general productions of the earth. There were but few cases of drought, which caused the grumblers,—they who are never suited—to complain.

The season as a whole, particularly for fruits, has never been surpassed. The display, and the interest manifested in this department of useful culture, continue to increase; the change, in substituting two days for the exhibition, worked admirably. Heretofore, everything was performed in an inconvenient, hurried, and unsatisfactory manner. The show was crowded into one day; the committees were compelled to make up their awards after partial examination, and many were often dissatisfied with their results. Now there is ample time for every thing, and the merits of every contributor can be fully discussed, and correctly decided.

The exhibition of fruits, with the exception of peaches, surpassed that of any previous season. There were nine hundred and seventy-nine dishes and baskets, from eighty-five contributors.

The committee would occupy too much space in their report, were they to enumerate every variety of fruit or contributor; they will, therefore, confine themselves to a list of those to whom gratuities were awarded:

To Charles F. Putnam, of Salem, for the largest collection of fruits, a gratuity of - - $5 00

" Robert Manning, of Salem, - - 3 00

" Moses Pettingel, of Topsfield, - - - 3 00

" A. D. Rogers, of Salem, for the best pears, assorted, 3 00

" Andrew Lackey, of Marblehead, - - 1 50

To Ephraim Emmerton, of Salem, - - 1 50
" Benjamin Porter, of Danvers, - - - 1 50
" E. S. Parker, of Groveland, - - 1 00
" G. W. Gage, of Methuen, - - - 1 00
" Moody Ordway, of West Newbury, - - 1 00
" J. B. Barker, of Methuen, for the finest collection apples, - - - - - 2 50
" E. G. Jackman, of Methuen, - - - 1 00
" William Bacheldor, of Andover, for his renovated St. Michael pears, - - - - 1 00
" William Poor, of Andover, - - - 1 00
" Josiah Newhall, of Lynnfield, - - - 1 00
" Wm. G. Lake, of Topsfield, for a large collection of apples and pears, - - - - 2 50
" J. & E. Lake, of Topsfield, - - - 2 00
" J. C. Hoadly, of Lawrence, - - - 50
" E. Clark, Jr., of Groveland, superior Hubbardston Nonsuch apples, - - - 50
" Pamela Wood, of Andover, - - 50
" Adam Nesmith, of Beverly, - - - 50
" Rufus Slocumb, of Haverhill, - - 50
" D. Merrill, 2d, of Methuen, - - - 50
" Jonas Holt, of Andover, - - - 50
" J. R. Bodwell, of Methuen, - - - 50
" Christopher How, " - - - 50
" J. M. Richards, of Lawrence, for fine Peaches, 75
" Elijah Hall, of Methuen, - - - 50
" S. C. Crosby, of " - - - - 50
" Joseph Russell, of Middleton, fine Peaches, 50
" Geo. D. Lund, of Lawrence, best ripened Isabella Grapes, - - - - - 50
" George Perkins, of Amesbury, best "Flemish Beauty Pears," - - - - - 50
" Joel Bowker, of Salem, - - - - 50
" J. Arrington, " " - - - 50
" Charles Ingalls of Methuen, - - - 50
" Daniel Nevens, of Methuen, for "Angouleme Pears," 50
" S. A. Furbush, of Lawrence, finest "Green Sweet Apples," - - - - 50

To Joshua Hale, of Newburyport, for the "St. Lawrence" Apple, - - - - - 75

" Abel Burnham, of Gloucester, best dish "Bartlett' Pears, - - - - - - 50

The best seedling Isabella Grape, was from Alvin Moor, of Tewksbury. This being out of the limits of the county, your committee could only return their thanks to Mr. Moor, for his contribution, and as it was the best seedling Isabella shown, we have named the fruit "Moor's Isabella." To the above gentleman, and to W. H. Hill, of Plaistow, who sent us fruit, our thanks are due. Most of the specimens of fruit raised in and around Lawrence, were fine; the soil being generally of a light sandy loam, is peculiarly fitted for the cultivation of the Peach and Grape, the high flavor of the former equalling those of New Jersey, and the earlier ripening of the Isabella Grape indicates a warm soil, and one well adapted for these fruits.

Mr. Barker, of Methuen, who obtained the highest gratuity for Apples, raised them on soil of the above description, and we were struck with their smooth and bright appearance, being free from blight or mildew.

The abundant supply of apples, the past season, throughout the country, particularly of the early varieties, and the difficulty of finding a ready market, has demonstrated that the caution thrown out some years since in the "Reports" was not altogether premature. We then remarked that apples, ripening at the time of our finest pears and peaches, would have but a very limited sale; hence the cultivation of winter apples was recommended as the most remunerative. At a recent meeting of a neighboring Society, the fruit committee recommended to farmers the general cultivation of the Gravenstein. This fine German apple would command its proper value, did it not ripen with the Bartlett, Harvard, Andrews, and other of our choicest pears and peaches. With the exception of early fall sweeting apples, which are wanted for cooking, the sale of dessert apples, ripening thus early in the fall, will be small, particularly in seasons when the pear or peach is abundant.

In the cultivation of fruit for sales, it is not good policy to

run to one or two varieties, however excellent; for the local markets may be overstocked. We have a case in point, in the general cultivation of the Baldwin apple. The Danvers Winter Sweet, Seaver's Sweeting, and the Aunt Hannah, now command nearly double the price of the above excellent sort. We should cultivate apples which ripen in succession throughout the season; and should avoid raising many of those that are in season at the time of our fine pears and peaches. We believe that apples are to become a more staple article for exportation, than they ever yet have been in New England. Our soil and climate are, we apprehend, better adapted for the permanent cultivation of this fruit, than the deep alluvial soils of the South and West. We find that there they are more subject to what has been denominated frozen sap blight and canker, which we think may be attributable to their deep soils, the roots running below the action of the sun and air, so necessary for the health and longevity of trees. We find here, on the contrary, apple trees in a good healthy and bearing state, that are half a century and more, old.

In New England we have a more shallow soil; hence trees grow slower, the wood ripening better than upon rich, deep soils, where they are forced to grow later, the wood being succulent, the leaves remaining long upon the trees, rendering them liable to be overtaken by the winter, before the sap is sufficiently elaborated to stand a severe freezing. Hence, we believe that as Massachusetts can never be made a grazing or grain growing region, compared at all with the South and West, and as the apples here are equal, if not superior, on the whole, to those of any other section, we would recommend to the farmers of Essex County, to cultivate the best keeping varieties of good winter apples, as a source of income vastly more sure of a safe return than that of Indian Corn; for while the Southerner cannot compete with us in the cultivation of the former, neither can we with him in the production of the latter.

From farther observation on the varieties of apples which, from time to time, we have seen, since we made a former report to this Society, we would repeat our assertion, that a fruit,

(particularly the apple,) originating on a given soil, will generally be superior in that locality or section, than in any other. We have in our mind the Newtown Pippin, Esopus Spitzenberg, Red Doctor, Pennock's Red Winter and Red Gilly-flower, fruits which are considered first rate, as well they may be, in their native habitats, but when grown upon our New England soil, are inferior to the Baldwin, Hubbardston Nonsuch, Mother, and Aunt Hannah. We say the same of the imported varieties generally, with a few exceptions, such as the Gravenstein of Germany, and the Ribston Pippin of England; the former of which does equally well with many of our native sorts, and the latter *occasionally*, particularly in deep and rich soils.

The following varieties of apples we would recommend for general culture.

*Hubbardston Nonsuch.* There is an apple cultivated somewhat extensively in Worcester county, and in some localities here, resembling externally, the Hubbardston, and supposed to be this fine fruit, which is not the true variety, but an inferior apple. It can, however, be known by the growth of the tree, as well as by the texture of the fruit. The growth of the genuine sort is straight, or upright, the shoots dark colored, very similar to the Baldwin, and nearly as good a grower in the nursery; while the spurious variety is pendant or waving in growth. The flesh of the true Hubbardston is yellow, that of the spurious, white. We cannot too highly recommend the culture of the Hubbardston Nonsuch. The fruit averages larger than the Baldwin, is in eating some three or four weeks earlier, and is more saccharine, or sweeter; hence some individuals call it sweet. It is not, however, sweet, as we denominate the Danvers Winter Sweet, or the Green Sweet of Coxe, but is a pleasant and rich table fruit—none better.

*Baldwin.* This well known fine winter fruit, all admit to be worthy of the extensive cultivation it receives.

The *Roxbury Russet* and *Green Sweet*, are two of the latest keeping, and most desirable apples for cultivation; they succeed well in our county.

*Murphy.* This seedling winter fruit originated in Salem,

in this county. It resembles the Winter Blue Permain, in form and color, but is a much better bearer than that variety, and more deserving of cultivation. It is supposed to have been produced from a seed of the Baldwin.

*Danvers Winter Sweet.* This is one of the best, if not the best, winter sweet apples we possess, and always commands a good price in our markets.

*Rhode Island Greening.* This apple is nearly as popular with many, and is almost as well known, as the Baldwin.

*Large Yellow Bellflower—Minister—Swarr.* These three varieties are great bearers, and worthy of cultivation; they are late keeping sorts, but require to be gathered with care, as they bruise easily, particularly the Minister.

*Jonathan,* a fine winter apple of good size, highly recommended by the late Judge Buel, who cultivated it extensively.

*Peck's Pleasant.* This apple, ripening from November to March, has been long cultivated in Rhode Island, and there considered a first rate fruit. It resembles, in form, the Aunt Hannah; it is, however, a larger apple. The tree is a moderate grower, bears well, annually, and is altogether worthy of culture.

*Ribstone Pippin.* This is one of the best apples in England, standing at the head of their winter varieties. It requires a deep and rich soil. We saw this fruit under culture, on the grounds of a Mr. Abbott, in South Andover, where it bore well, the fruit large and fair, the trees under good culture, and the soil was highly manured. It being the only instance in which we have witnessed the culture of this English sort, we cannot speak confidently of its success in our county.

*Ladies' Sweeting.* This winter fruit keeps, like the Danvers Winter Sweet, late without shrivelling, but we cannot coincide with Mr. Downing, in its superiority over the Danvers Sweet. The small nursery trees we have thought rather tender, having suffered more with us than many others. It is, however, considered by many cultivators, an acquisition to our fine winter sweeting apples.

*Aunt Hannah.* This fine apple, in flavor resembling the celebrated Newtown Pippen, *as grown on Long Island and in*

*New Jersey*, we can commend to cultivators, although of small medium size, as heretofore grown upon old trees in poor soil; yet upon young and thrifty stocks, and upon a strong and well manured land, they will grow to a good medium size. This apple is like the Newtown Pippin in form, hence a member of the Massachusetts Horticultural Society, on our first exhibiting these apples at their weekly shows, pronounced them "small specimens of that variety," also as their flavor was of the same richness. The Aunt Hannah originated in this county; is in eating from November to February, and altogether deserving of cultivation.

*Red Pumpkin Sweeting.* A Connecticut seedling, introduced by Mr. Ramsdell, of Thompson, and esteemed for the large crops it bears, as well as for its saccharine flavor. The tree is a vigorous grower, with very upright shoots, and comes early into bearing, and is one of the best winter sweet apples we possess; in season, from October to February.

*Large Yellow Sweet Bough.* We consider this to be the best EARLY sweet apple of our county; it is of large size, bears annually medium crops. The tree is not a great grower, but healthy and thrifty. In the eastern part of New Hampshire, this fruit is called Early Washington. Coming early in the summer, it is a saleable apple in the markets.

*St. Lawrence.* This is a most beautiful late fall fruit, exhibited for the first time at our last anniversary, by Joshua Hale, of Newburyport; it is a seedling apple, first raised by Henry Corse, an amateur cultivator, in Montreal, and which promises to be an acquisition to our list of apples. Mr. Hale informs us that the tree, with him, is of an upright growth, similar to the Baldwin, and is a good bearer annually; it was set out in the fall of 1840, and bore, the last season, one and a half bushels of fine fruit. Your committee found this fruit to be in eating in November, and of a rich sub-acid flavor, being an excellent dessert fruit. In its rich coloring it surpasses any apple we have ever seen, being beautifully striped with bright flashes of crimson red.

*Fall Harvey.* This is also a fine, large apple, of a rich flavor, but somewhat variable in quality, as occasionally it will

be small and rather *scrubby*. It being, however, generally fair and handsome, we commend its culture to our farmers.

*Williams' Early Red.* This variety, when planted upon a warm and deep soil, with high manuring, produces a beautiful fruit, above medium size, but in a light, thin soil, it is small and indifferent. It will not *accommodate* itself, as has been said of the Baldwin, to almost every variety of soil and aspect; but under the above mode of culture it deserves a place in every garden and orchard, and will then command a greater price than any apple coming thus early in the season.

*Porter.* This is a Massachusetts apple, first raised by Rev. Mr. Porter, of Sherburne. It is deservedly a great favorite as a dessert fruit, and commands a good price in the markets. The tree is very productive, the fruit rather large and oblong, ripening in September.

*Haskell Sweet.* Originated on the farm of Dea. Haskell, in Ipswich, (now owned by Mr. Nourse, of the firm of Ruggles, Nourse & Mason,) and on which the original stock is now standing. It is one of the best, if not the best fall sweeting. It is extenfively cultivated in western New York, and deserves to be better known in New England. By Cole it is called the Sassafras apple. It is large, and very juicy, in eating from the middle of October to the middle of November. The nursery trees are straight and good growers.

## PEARS.

So many varieties of this fruit have been brought forward, it is difficult to say which are, upon the whole, most desirable for general cultivation; for while many of the new Belgian and Flemish kinds succeed well, as they often do, in the sheltered and warm gardens of our cities, they canker and blast in open country exposure. The best varieties of pears, are those originated in our own country, or in the more temperate and colder latitudes of Europe. Many of the old varieties heretofore cultivated, are now displaced by better sorts. It was well, at our former shows, to bring forward those that were found, upon trial, indifferent if not worthless, in order that we should

avoid working such fruits; but the time, we think, has arrived, when it is no longer necessary to exhibit at our annual shows these discarded fruits. We have also some varieties of apples, which many of our farmers continue to cultivate, that ought not to be recommended for general culture. The Winter Blue Permain is not so desirable a fruit as the Murphy, which resembles it closely in form and color, but is a better bearer, and altogether superior for orchard culture; and the Kilham Hill is perishable in its nature, and the worst keeping apple we are acquainted with. The following pears, which have thus far done well in open culture, we would recommend in this report:

*Bloodgood*, early, Native fruit; *Rostiezer*, early, Native fruit.
*Bartlett*, Sept'r, Foreign " ; *Cushing*, Sept'r. " "
*Andrews*, " Native " ; *Buffum*, " " "
*Flemish Beauty*, Sept. Foreign fruit.
*Louise Bonne de Jersey*, Sept. Foreign fruit.
*Seckel*, Sept. Native fruit; *Lewis*, early winter, Native fruit.
*Winter Nelis*, winter, Native fruit.
*Vicar of Winkfield*, winter, Foreign fruit.
*Black Pear of Worcester*,—*Catillac*,—*Uvedale's St. Germain* or *Pound*. These three are Foreign fruits, for winter cooking.

## PEACHES.

In the cultivation of this fruit it is not well to run to many varieties, it being better policy to cultivate a few of the hardiest and best sorts. The yellow-flesh Peaches, although not the highest flavored, are those which we should recommend for market. Among these, the most desirable are the Red-Cheek Melacoton and *its seedlings*; Crawford's Early and Crawford's Late Yellow. The Red-Cheek Melacoton we have found to be most profitable, inasmuch as it ripens after the general supply of peaches is gone, and will then command a good price. We have had this fruit, with its brilliant red cheek, hanging upon the trees as late as the second or third week in October; it is also a great bearer annually. Mr. Downing says of it, "Hundreds of thousands of bushels are

raised and sent to market, in this country, every year." It is also an American seedling, and if true, as said by Mr. Cole, that natives are more hardy than foreign peach trees, this will be an additional recommendation. Of Crawford's Early and Crawford's Late, we would say that no two sorts, following each other in their time of ripening, are more desirable for cultivation, in our catalogues of peaches.

## QUINCES.

*Orange Quince.* This is a profitable fruit for cultivation, particularly the Early Orange, or Apple Quince. Many quince trees which we see around us, are seedlings, with fruit of a green color, oblong form, and thick, leathery skin, and are hardly fit for cultivation. We should avoid raising bushes of this kind, either from seeds or cuttings. We would recommend planting from seeds or cuttings of the true variety, as seeds from this sort will most generally produce their kind; but the surest method of obtaining them, is by engrafting. We have, however, never found any difficulty in raising at least a great proportion of fine fruited bushes, from seeds of the finest sorts. In regard to the cultivation of this fruit, we apprehend it to be a delusion to suppose that quince trees want a wet and shady position, and that they do not require manuring. On the contrary, they should be set in good loam, and the earth should be loosened deeply, or trenched by double spading, and well manured with a good compost in the drills. Shorten in the branches, (one half of the last year's growth) give the roots a good drenching with water *at the time of setting out*, (NOT after) leave the soil around the stem, concave; place them ten feet apart, and the rows twelve feet; prune just after the fall of the leaf, or early in March; fork in, *late* in the fall, three or four shovels full of fresh manure. After loosening around the trees in spring, you may then give the whole a broadcast of salt.

In this connection we would remark, that as a general compost for fruit trees, we consider nothing superior to that formed of wood ashes and peat, with an admixture of salt.

## CRANBERRIES.

Your Committee, upon the upland culture of the Cranberry, would respectfully report:

That upon the above culture of this valuable fruit, we would premise that, in our opinion, the Essex County as well as other Societies in this State, have been heretofore rather premature in their recommendation of this mode of culture. As "one swallow does not make a summer," neither will one experiment justify us in commending this method. All know that the cranberry is natural to the meadow, and although the covering with water may be injurious at the time of flowering, as well as at the time of setting its fruit, still, the flooding of the vines in winter, or the covering with litter or evergreens to protect the roots, as is practised in the upland culture, will prevent the culture of this fruit to any extent.

In order to be made remunerative, these beds or patches must be made on the meadow, or upon a springy soil. Your committee visited, this fall, Mr. Needham's fine cranberry patch in Danvers, which is upon upland, so called. We found the owner, with his man, in the process of hand weeding, thus late in the season; and to the inquiry as regards the labor in weeding, how it would compare with the same area of strawberries, he replied that to keep this bed well weeded, required five times the labor. The whole process, from the first preparation of the land,—the placing of meadow or swamp mud between the rows in mid-summer, the weeding throughout the season, the necessity of covering them in winter with evergreens,—requires a vast amount of labor. In considering the above testimony, which is corroborated by S. P. Fowler, of the committee, we have arrived at the conclusion, that the upland culture could not be recommended to the farmers of this county. Your committee also found, that in Mr. Needham's mode of culture, the fruit cannot be gathered by the cranberry rakes without great injury to the vines, but that they must be hand picked.

The same objections we should not make to their cultivation on their natural habitats, as we should to the corn field, but

would strongly commend the setting out and extending the area of our cranberry meadows, and also in preparing others by the same means which are now used in reclaiming them for the production of English grass. For the best manner of doing this we would refer to the former reports of the society.

For the Committee. JOHN M. IVES.

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## INTRODUCTION OF NEW FRUITS.

The Committee on the Introduction of New Fruits, report that Messrs. J. & E. Lake, of Topsfield, presented three varieties of seedling grapes, for the consideration of the committee, ripening about the middle of September. One of these varieties, bearing a small berry, is an improvement on the native grape. But the committee do not consider it as approaching that high quality, for which the society offer the premiums of twenty-five and fifty dollars, viz: "for a variety of native or seedling grape, of decidedly superior quality, ripening in this county in the open air, by the middle of September; prolific, and suitable for the table."

The committee would suggest to persons making experiments in raising new varieties of the grape, to avail themselves of the process of the cross fertilization of the flowers of different varieties; as for instance, the native Isabella with the Black Hamburg, or some other desirable foreign variety. Seeds thus obtained and planted, would be much more likely to produce the desired result. The person who shall produce such a grape as is contemplated, for the society's premiums, will be a public benefactor. It is hoped that experiments will continue to be made, till the object in view be obtained.

JOSIAH NEWHALL, Chairman.

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## VEGETABLES.

On entering upon the discharge of their duties, your Committee found placed at their disposal a motley group of the

productions of the Vegetable kingdom, consistiug of mammoth Squashes; huge Beets, Carrots, and Onions; Potatoes, cooked and uncooked; Tomatoes, in varieties; Cabbages, Corn, &c. The delicious and choice fruits, as the apple, the pear, the peach, the plum, the grape;—the lovely and beautiful flowers of the greenhouse and the garden, of the fields, the woods, and the meadows,—had been assigned to other committees.

The display of vegetables was good, a very perceptible improvement upon that of many previous years, but yet did not attain that standard of perfection which, from the character of our county, we had a right to expect. The following contributions were received:

From Charles S. Storrow, of Lawrence, by Edward Flint. Marrow Squashes; white flat Dutch Turnips; large Dutch Parsnips; early Turnip-rooted and large blood Beets; and Tomatoes.

C. F. Gage, Methuen. Crookneck Squashes; Corn, white and yellow, and three varieties for popping; Pine apple Potatoes.

Jonas Holt, Andover. Early white and evergreen Corn; Pink Eye, Peach Blossom, Black, and Rio de la Plata Potatoes.

J. F. Hopkins, North Andover. Sicily Cauliflowers, Early Marrow Squashes, ten days earlier than the common; Early Drumhead Cabbages.

C. S. Newell. Potatoes grown in land broken up two years ago, no manure used, eleven in a hill, fifty eight to a bushel—none rotten—raised in Kittery, Me.

C. French. Andover. One peck of Black Potatoes, raised one hundred and seventeen bushels to one-third of an acre.

N. Morse, Methuen. Cucumbers.

J. Brierly, North Andover. Tomatoes.

James Stevens, North Andover. Squashes resembling the marrow, said to be superior.

Levi Sprague, Lawrence. Squashes.

Moses Sargent, Lawrence. Squashes.

W. F. Porter, Bradford. Canada Corn, planted May 25.

J. B. Barker, Methuen. Radish and Turnip Beets; Flat Turnips; white, yellow and rice Corn; Drumhead Cabbages Crook-neck Squashes.

Albert Berry. Crook neck Squashes.

G. J. Thornton, Andover. Martynias; Early Crook-neck Squashes; Prince Albert Peas.

J. M. Ives. Autumnal marrow Squashes of the size and form as when first introduced; Tomatoes; sweet Potatoes; Lima Beans raised from seed, received from Italy last Spring,

Eugene O'Heran, gardener to Daniel Saunders, jr., of Lawrence. Martynias; Cauliflowers; Beets; Corn.

I. S. Hill, Byfield. Hill Corn.

Moses Pettingell, Topsfield. Corn.

John Walsh, Methuen. Turnips—flat, yellow, sweet.

T. I. Goodrich, Haverhill. Silver skin red and white Onions.

Lawrence Poor Farm. Cabbages, Potatoes; Onions; Beets, &c.

W. S. Howard, Lawrenee. Squashes.

A. Nichols, Middleton. Bradstreet Potatoes, planted by the side of the China reds, (cooked); popping Corn; a new variety of Corn; Onions; China red Potatoes.

W. Rines, Lawrence. Squashes.

D. Merrill, 2d., Methuen. Squashes and Pumpkins.

F. R. Frye, Methuen. Pumpkins, four from one seed.

S. A. Furbush, Lawrence. Peppers and Tomatoes.

J. Phillips, Methuen. Mock orange Gourds.

Joseph F. Ingalls, Methuen. Squashes; Pumpkins, nine from one seed—six from another; Potatoes in variety; Sugar Beets.

A. P. Cheney, North Andover. Potatoes in variety.

Your committee award the following gratuities:

| | |
|---|---|
| C. S. Storrow, of Lawrence, - - - | $1 25 |
| J. F. Hopkins, of North Andover, - - | 1 25 |
| Andrew Nichols, of Middleton, - - - | 1 00 |
| J. B. Barker, of Methuen, - - - | 1 00 |
| E. O'Heran, of Lawrence, - - - | 50 |
| Moses Sargent, " - - - - | 50 |
| Charles F. Gage, of Methuen, - - - | 50 |
| Joseph T. Ingalls, " - - - - | 50 |
| Albert Berry, of North Andover, - - | 50 |
| D. Merrill, 2d., of Methuen, - - - - | 50 |
| John Walsh, of " - - - - | 50 |

| | |
|---|---|
| Lawrence Poor Farm, | 50 |
| J. M. Ives, of Salem, | 50 |
| A. P. Cheney, of North Andover, | 50 |
| Jonas Holt, of Andover, | 50 |

Your committee regret that the amount appropriated was so limited as to exclude the awarding of gratuities to others of the contributors, who were deserving of some notice in this respect. They sincerely trust that this department will receive from the Trustees, another season, more encouragement than has heretofore been so sparingly bestowed.

They would also respectfully suggest to the Trustees, the expediency of establishing certain premiums to be awarded at the annual exhibition, for the best general display of vegetables, also for that of particular kinds, as of beets, squashes, or the like, and for the introduction of any new variety or varieties, which, upon trial, shall prove worthy of general cultivation.

The Society cannot appropriate a portion of its income to a more worthy object than the encouragement, among our community, more especially the agricultural portion, of a taste for the formation of kitchen gardens, commonly so called, where vegetables of all kinds can be found growing in the greatest state of perfection. These will conduce not only to the profits of the farm, and consequently to the productive wealth of the country, but to the health and happiness of all, more especially of those engaged in these pursuits. This last is the most important consideration.

Your Committee cannot more appropriately close this report than by quoting the following extract from the Rev. Dr. Deane's celebrated work on agriculture, "The New England Farmer," published more than thirty years since, and having passed through several editions.

"I consider the kitchen garden as of very considerable importance, as pot herbs, salads, and roots of various kinds are useful in housekeeping. Having plenty of them at hand, a family will not be so likely to run into the error, which is too common in this country, of eating flesh in too great a proportion for health. Farmers, as well as others, should have kitchen gardens. And they need not grudge the labour of tending

them, which may be done at odd intervals of time, which may otherwise chance to be consumed in needless loitering."

To the farmers of Essex, a county containing so many cities and large towns scattered over its territory, having a population more dense than any territory of the same extent in the United States, and so large a portion of it engaged in manufacturing and other pursuits than those of agriculture—thus affording very convenient and accessible markets for the disposal of the products of the garden—these remarks are particularly deserving of their consideration.

Respectfully submitted,

HENRY WHEATLAND, Chairman.

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## BEES AND HONEY.

The Committee on Bees and Honey, regret to say, that while luscious specimens of purest honey, richly meriting something more substantial than mere "honorable mention," and phrase of commendation, were offered for inspection and taste,—pleasing the eye with the virgin whiteness of its inimitable texture, and affording indubitable promise that it would titillate the palate of the *mel-amateur*, (Anglice, *honey-lover*,) they had no power nor authority to bestow anything else! It had not seemed good in the judgment of the money-voting power of the Society, to assign anything, in the shape of a pecuniary reward, to those of our farmers who might have devoted any of their small means in providing comfortable homes for "the little busy bees," or any of their valuable time in the cultivation and care of the industrious tenants of the waxy and sweetly odorous hive. The Committee regret this economy, which appears to them to be unnecessary and impolitic. They think that the Society have not put a just appreciation upon the manufacturing system and products of these great, or rather little, exemplars of industry—of those whose instincts, nurtured by the Creator himself, so closely border, and even trench upon reason, as to make all who note them, believe, with glorious old Virgil, that there is "fused into them a por-

tion of the divine mind, and even something of Heaven's own influence."

> "Esse apibus partem divinæ mentis, et haustus
> Etherios dixere."—*Virgil's 4th Georgic.*

By this neglect of the Society, they have actually ranked the "godlike race of the Bees," as an old Greek Philosopher called them, even lower than "bulky, fat, embossed" pumpkins, plethoric turnips, and ("if you have tears prepare to shed them now,") even lower than a tunbellied, lachrymal onion, or an Oolian bean, yea, even below the smallest of "small potatoes." Oh! if the bees but knew it, how would they buzz forth their doleful lamentations over this downfall of their pride. How would they hum "to Bee or not to Bee" encouraged! "that's the question." The Committee, however, find some consolation in the fact, that though slighted by the Society, the offerings of the Bees were considerately and considerably noticed by the masses, the people, them of the "sober second thought," the great public, who evidently had a juster and more *tasteful* appreciation of the tempting specimens of apiarian handicraft paraded on the tables of the Exhibition-Room. For several open boxes having been placed, in full view and within convenient reach, the public, great and small, decidedly "put their foot" or rather their fingers into it, as was manifest from impressions, "visible to the naked eye," made by sundry lilliputian digits, and brobdignagian thumbs. Yea, even as Samson took of the honey from the carcass of the Lion, and did eat, so did the "many" take of the honey of the great show at Lawrence, and eat thereof, "without money, and without price." *Hei mihi!*" as the Latins said,—which being interpreted signifieth, "*deary me!*" for the public tongue took improper liberties with a box of virgin-honey, of undefiled sweetness, rich, full, fair, balmy, sweet, even as a maiden's lip, raised by one Mr Bodwell, of Lawrence (that is, the honey, not the lip,) and which had become, by the regular process of lawful bargain and sale, the private and personal property of the writer of this article. "Our sufferings *was* tolerable and not to be borne." We are told by one of the most celebrated English Poets, whose

works have become as common as "household words," one Mrs. Goose, that "once on a time," a fearful son of Anak, (afterwards, most happily for suffering humanity, immolated by that illustrious Knight-errant, Mr. Jack, the giant-killer,) gave utterance to the following Byronic effusion,

"Fee, faw, fo, fum
I smell the blood of an English mun!
Dead or alive I will have some!"—

Now "mutatis mutandis" — which in the vernacular signifieth "putting honey for raw Johnny Bull,"— (and if it don't mean that, ask the Chairman of the "Committee on Pigs," what it does mean,) we may paraphrase this versicle thus,—

Fum, faw, fo, fee!
I smell the sweets of the Honey-Bee!
Sting or no sting, some shall go into me!

So said Giant-Public, and fingered, and felt, and tasted, to the damage and detriment of the Chairman of the Committee *who sat on bees*, (that is, the committee, not the chairman,) to the amount of one moiety of the value of said honey — said value to have been determined, when the flavory and savory sweets should have been duly delivered between the "high contracting parties," each of whom stands "six feet in his stockings," more or less, as the case may be!

Now the Committee had been authorized to bestow no premiums — to assign no gratuities! and could only have rewarded, if they rewarded at all, by inserting their hands into their own crumenal pouches, and even as

"Little Jacky Horner
Who sat in a corner—
Did put in his thumb
And pull out a *plum!*"

have drawn out the "wherewith," from the limited treasures of their own personal purses, and so, without authority of the society, have distributed largesses, and like the Pickwickian associates, have paid their own expenses. Having, however, a just regard for the authority of the society, in whose behalf they acted, and not choosing to take the risk of encountering its displeasure, if not its denunciations, by acting in the premises, "without bell or book," they merely add a report of what

they would have done, had they had anything, (say about $9,25) to do with. That is, not being able to give any thing by "*deed*," we remember them by "*will*."

They would have given to Mr. Bodwell, of Lawrence, for a box of beautiful honey, (15 lbs.) which the Chairman of this Committee "sought but never found!" $1 50

To Col. Stanley, of Lawrence and Methuen, (half to each!) for a box of exquisite honey (25 lbs.) from which the common finger sucked, say ten lbs.! 2 00

To Mr. Somebody, of Somewhere,—probably in No-mansland,—for another box, 12 lbs. do. do do., from which the public finger do. do., say four lbs., 75

To an unknown, very good-looking, but sharp-set gentleman, in a cart with a fast horse, 5 00

For three hives, well planned, well planed, well painted, well paned, but not well paid, and all well filled with live bees, wide awake, and in "the full tide of successful experiment," but who, (that is, the man, not the Bees,) incontinently fled, horse, cart, and hives, before the Committee could say "Jack Robinson," or learn his name or nation, (that is, the man's, not Mr. Robinson's,) on being told that the Society had awarded

"Praises, not money,
For hives and honey."—*New song by the Committee.*

The Committee, in closing this highly important and touching report, in which

"Sweet dropping words, like honey, they have shed,"—[*Spencer.*

feel constrained to declare that after this fatal mistake of the Society, in closing their strong-box against the applications of the honey-bee, unbribed by its sweets, and unterrified by its sting, they never expect to be able to induce the lovers of this sharp set, diligent, and useful hexaped, to present their slighted offerings at future annual festivals—and so

"GOD SAVE THE QUEEN!"

GOD SAVE THE COMMONWEALTH OF BEES!

For the Committee,

HENRY K. OLIVER, Chairman.

## CLOTH AND HOSIERY.

The Committee on Cloth and Hosiery, beg leave to submit the following report:

We find the following articles on exhibition, to which we have annexed, in our judgment, appropriate awards:

Martha C. Knight, of Methuen. One pair knit Socks; one pair knit Slippers; gratuity - - - - 50

Olive Park, of Methuen. One pair knit worsted Hose; gratuity, - - - - - - 50

Mrs. H. B. Plummer, Salem. Three pairs knit open work Cotton Hose; gratuity, - - - 1 00

Mary Garney, Marblehead. One pair knit Woolen Hose. These being knit with one hand only, the lady being deprived of the use of the other by paralysis, we award a gratuity of - - - 50

Elizabeth Caldwell, Byfield. One pair knit Carriage Boots; gratuity, - - - - 50

John Davis, Amesbury. One Tufted Shawl. This being from a manufacturing establishment, your Committee do not consider it to be entirely within their power to award a premium, but make honorable mention thereof, and award the thanks of the Society

James Bailey, Andover. Thirty-two yards Cotton and Linen Cloth, mixed; gratuity, 2 00

Mrs. A. K. Ritters, Lawrence. One Linen Table Cloth, three Linen Towels; gratuity, 2 00

L. Morrison, Methuen. Eight packages Woolen Yarns, made by machinery—very handsome yarn; we return the thanks of the Society.

Essex Company, Lawrence. Four pieces Lyonese Cloth—a branch of manufactures not yet established in this country; honorable mention.

Jabez Mann, Ipswich. Twelve dozen Ladies' and Misses' Hose, knit by machinery; honorable mention, and thanks of the Society.

Smith & Stannard, Lawrence. German Worsted, and Dress Patterns; do. do. do.

Hodges & Sons, North Andover. Two pieces Flannel; honorable mention.

N. Stevens & Son, North Andover. Two pieces Flannel; honorable mention.

Bay State Mills, Lawrence. Two pieces Overcoating; two pieces Doeskin; two pieces Cadet Sacking; twenty-seven pieces Flannel; two pieces Carpeting; eight Shawls; three Scarfs; one Royal Stuart Shawl. Your Committee return the thanks of the Society for the very beautiful display of their goods from these mills, whose well established reputation, makes an honorable mention almost superfluous.

Mrs. Ann Harris, Newburyport. One pair open work cotton Hose; gratuity, - - - - - 50

Mrs. Mehitable Holt. Four pair men's Half-hose—the best shown; premium, - - - - $1 00

Hannah Carlton. Six pair knit Socks; six pair knit Mittens; two pair knit Gloves—very good serviceable articles; gratuity, - - - - - 1 00

For the Committee, SAMUEL C. WEBBER,
B. C. PUTNAM.

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## CARPETINGS, RUGS, AND COUNTERPANES.

The Committee report that they have awarded for Carpetings, the first premium to the Bay State Mills, Lawrence, for superior quality, and rich design of Felt Carpetings, $5 00

Second premium, to Wm. Truelan, Andover, for best quality of List Carpeting, - - - - 3 00

On Rugs, first premium to Mrs. Phebe Atkinson, of Andover, for the best Rug, which was presented by Jos. F. Clark, of Lawrence, and made of rags, 3 00

Second premium, to Mrs. Joseph Grant, of Salem, 2 00

Third, gratuity, to Mrs. Mehitable Trask, of Salem, (aged 75 years,) for three Braided Rugs, - 1 00

On Counterpanes, first premium, to Mrs. E. C. Greene, of Ipswich, a Silk Patch Work Quilt, 4 00

Second premium, to Miss J. P. Hall, of Methuen, a white knit Counterpane, 2 00
Third, gratuity, to Nancy A. Trask, of Beverly, a White Knit Counterpane, 2 00

For the Committee, A. W. STEARNS.

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## LEATHER,

### AND ARTICLES MANUFACTURED THEREFROM.

The Committee on Leather and Articles Manufactured therefrom, having attended to the duty assigned them, report as follows: They award to

William Lucy, Haverhill, best pair of Calf Boots, prem. $4 00
Stickney & Co., Groveland, second best do. do. do. 2 00
William Lucy, Haverhill, best pair Ladies Calf Boots, do. 2 00
William Lucy, " women's Dutch Boots; grat. 1 00
George French, Andover, very superior Chaise Harness; gratuity, - - - - - 6 00
Gillson, Stackpole & Hobbs, Danvers, two Hides, very fine, high-finished enamelled Leather; gratuity, 3 00
Edward Page, Lawrence, very fine specimens Belting, both sewed and pegged; gratuity, 4 00

Mr. Page also presented some very neat leather-topped Rollers and Pulleys, which the committee think deserve special notice.

Richard Tenney, Georgetown, very nice Boot-lacings and Shoe-strings; gratuity, - - - - 2 00

A light Harness, presented by Joseph Stowell, of Lawrence, was noticed, as being very neat.

Considering the great amount of capital and labor employed in the Shoe and Leather business,—it being in fact THE business of the county,—the committee are surprised that so few articles have been offered; and they hope that hereafter, a greater interest will be manifested, in presenting specimens from this branch of domestic manufacture.

SAMUEL PRESTON,
GEORGE J. TENNEY,
PAUL TITCOMB. } Committee.

## FANCY ARTICLES.

The Committee on Fancy Articles, and articles not included in the duties of other committees, have a very strong feeling of the difficulties in the way of making an accurate and perfectly just determination in the distribution of the gratuities placed at their disposal.

The somewhat increased number of the contributions, rendered the task of discrimination more than usually difficult; and the short time afforded for examination, was found to be painfully insufficient.

Among the great display of beautiful articles exhibited, the committee have endeavored to make as fair a selection as possible, in awarding the gratuities, and recommend the following awards:

J. M. Miller, Methuen. Apple parer, - - 50
Mrs. McAnslane. Bead Cottage, - - - 1 00
George R. Rowe, Lawrence. Miniature Whale boat, 50
J. A. Hodge, Lawrence. Shell Monument and Rug work, 50
Susan Tufts, " Framed Worsted work, and Shell monument, - - - - - 75
Elizabeth C. Hatch, Lawrence. Shell Box, - 50
C.T. Hanson, Lawrence. Case of stuffed Birds, - 50
C. F. Annon. Miniature steam Engine, - - 50
Nathaniel Woodbury. Machine for cutting butter from firkin, - - - - - - 50
Ann G. Putnam, Salem, (seven years of age.) Sofa pillow and wrought Slippers, - - - 50
A. Messer, Methuen. Wrought infant Blankets and Skirts, 50
Alarantha Bradbury, Haverhill, (eleven years old.) Chair cushion, - - - - - 50
Frances A. Woodbury, North Beverly. Sofa pillow; Tabouret cover; and lamp Mat, - - - 50
Hannah C. Sawyer, Andover. Picture in Crewel work, 50
Ann Wilson, Lawrence. Ottoman, - - - 50
Washington Merrill, Methuen. Twelve wool felt Hats, 50
Mrs. H. M. Storrs, Lawrence. Velvet Cushion; and wrought handkerchief, - - - - 50

Miss E. P. Richardson, Lawrence. Imitation Heron feathers - - - - - - 50
Mary P. Low, Methuen, (eight years old.) Ottoman 50
A. K. Brewster, Lawrence. Shell Table - - 75
Eliza Kimball, Lawrence. Lamp Mats - - 50
Isaac Wyatt, Lawrence, (deaf and dumb,) Canes, and Apple Parer - - - - - 50
Miss A. A. Tenny, Lawrence. Two Oil Paintings 1,00
J. C. Stanley, Lawrence. Tabouret Covers - 50
Miss N. G. Page, Lawrence. Lamp Mats - - 50
E. L. Davis, Methuen. Lamp Mats - - 50
Lucretia W. Richardson, Andover. Two Tabourets 1,00
C. W. Higgins, Andover. Ottomans - - 50
Mrs. S. Cummings, Lawrence. Lamp Mat - 50
Miss E. Benson, Lawrence. Embroidered Skirt 50
Martha A. Pierce, Lawrence. Lamp Mat - - 50
Mrs J. W. Mathes, Lawrence. Lamp Mats - 50
Abby R. Sweetser, Salem. Crotchet Tidy - - 50
Miss H. Hazeltine, Haverhill. Framed Embroidery 75
Mrs C. W. Mathews, Lawrence. Wrought Chair and Tabouret - - - - - 1,00
Mrs J. B. Atkinson, Lawrence. Two Tabourets 1,00
J. A. Griffin, Andover. Eight wrought Chairs 75
Mrs W. S. Annis, Lawrence. Two wrought Tabourets 50
D. Wentworth & Co., Lawrence. Four pieces Stucco Work - - - - - - 50
Mrs. Harriet Flanders, Lawrence. Lamp Mat - 50
Ellen F. Sawyer, Lawrence, (ten years old.) Silk Patch Work Chair seat - - - 50
Mrs. J. D. Drew, Lawrence. Two wrought Ottomans 75
Mrs. A. Towne, Lawrence. Bead Lamp Mat - 50
Miss. J. B. Barker, Methuen. Pair Briochi - 50
Mrs. A. S. Jordan, Lawrence. Lamp Mat and Chair Covering - - - - - 50
Katy A. Dole, Methuen. One piece Embroidery - 50
Mrs. J. C. Dow, Lawrence. Crochet Tidy - 50
Harriet Joscelyn, Lawrence. Ottoman Cover and Chairs - - - - - - 50

Thomas Davidson. Lawrence. View from Townhill 50
Miss Knox, Lawrence. Shell Vase - - 50
Miss E. Wheeler, Haverhill. Ottoman Top - 50
Eliza Ann Gage, Haverhill. Toilet Cushion and Cricket Covers - - - - 75
Miss E. G. Twombly, Lawrence. Wrought Chair Covers - - - - - - 50
Anna S. Judson, Lawrence. Two Lead Pencillings 50
J. B. Hall, Methuen. Two Crayon Drawings - 50
Mary A. Kimball, Boxford. Lamp Mat and Tidy 50
Caroline M. Abbott, Andover. Table Tidy and Cake Doyley - - - - - 50
Anna J. Appleton, Newburyport. Two Table Covers 50
H. B. Plummer, Lawrence. Cone Basket - - 50
A. A. Sanborn, Lawrence. Two Paintings - 50

The large display of Velvet Room paper by the Lawrence Charter Paper Company, excited the admiration of the Committee, by the richness of the figures, the brilliancy of the colors and the superior execution of the whole work; as specimens of the first rank in this branch of manufactures, these papers merit, and they hereby receive, the honorable mention of the Society.

JOSEPH ADAMS,
JOHN ALLEY,
J. B. FAIRFIELD. } Committee.

## FARMS.

The Committee on Farms report that their attention has been called to only one farm entered for premium, that of Joseph Holt Jr., in Andover, in the South Parish. This was visited by a majority of the committee in June last, and the day was spent in viewing the improvements effected by its owner. These consist principally in removing large quantities of rocks and placing them in deep trenches and substantial walls, and in this way reclaiming land from pasture into mowing and tillage and fencing it in the most durable manner. This

work has been done principally by Mr. Holt himself, but in the minds of the committee there were strong doubts whether the labor was so judiciously applied, as it would have been in the higher cultivation of land already fitted for the scythe and plough. It was stated, however, by Mr. Holt that the farm came into his possession by inheritance, and that from ancestral associations he had been induced to expend so much labor, in subduing ground so rough and stony.

Mr. Holt's farm is small, consisting of less than 30 acres in the homestead, and, including meadow and woodland, 80 acres in all. Its management appears to be marked by neatness, skill and industry, and doubtless it yields as good an income as similar farms, under the like management. There is a convenient cellar under the barn, but we noticed nothing peculiar in the arrangements of the buildings or the yards, or in the cultivation of the crops, from which we think any new information could be derived for the benefit of other farmers. But the pattern Mr. Holt presents of a hard-working and an economical farmer, and the improvements he has effected, consideriug the means at his command, entitle him to the commendation of the Society, and a gratuity of $15.

Mr. Holt's land, like much that we see in the county, would be greatly benefitted by a more liberal outlay for manure, either by manufacturing it from peat, leaves and head-lands, composted with barn-manure, or by purchasing stable-manure, night-soil, ashes or other fertilizers. In the opinion of the committee, uot one farmer in ten, in the county, lays up $100 a year for the proceeds of his farm, over and above his expenses, principally for the reason that the land cultivated is not manured so highly as it ought to be, and it consequently fails to produce remunerating crops.

As a general maxim, it may be asserted that land poorly manured impoverishes its cultivator, land moderately manured yields a moderate subsistence, whilst land that is highly manured, pays liberally for its liberal treatment. This is true not merely in regard to tillage crops, but also to grass lands and orchards, and the committee would say cultivate only so much land as can be cultivated well,—a proposition so just

that it will be assented to by nearly every farmer, and yet is practised upon by only a few. A good illustration of the benefits of high and careful culture, is furnished by the market gardeners here in our own County, who, on a few acres, raise crops of onions, cabbages and squashes, that yield them a net profit of hundreds of dollars, per acre. But most of our farmers spread their manure and labor over so large a surface, that both are frittered away and nearly lost. Until more judicious economy is practised in this respect, we may expect to hear from the mass of our farmers, as we do hear, a negative response to the question, 'Is farming profitable?'

In November, the committee, by invitation of the Overseers of the Poor, visited the Town Farm in Danvers. This farm, under the management of Adino Page, superintendant of the Alms House establishment there, who has often been a successful competitor for our premiums for grain crops, is conducted with good judgment and skill, and, in connection with other industrial operations carried on there, is made so productive as to reduce the cost of supporting the poor at the house, deducting outside expenses, to twenty-eight cents a week for each inmate. The soil is light and very gravelly—truly a hungry soil; and yet by deep ploughing and liberal manuring, it yields crops above the average of the best lands in the county.

Large quantities of offal are purchased at the slaughter houses in Danvers, and brought to this establishment. Here the heads and shins are boiled,—the tallow is saved for the curriers, and soap and candle makers; the neats-foot oil for the harness makers; the bones for the button manufacturers, and for other purposes; the bits of skin for the glue makers; and the refuse of these, with the blood and entrails, are thrown into the large yard adjoining, as a rich, though not very delicate, food for the hundred or more swine, which devour all of it that is eatable, and, with a plentiful supply of meadow mud, work up the rest into the richest of food for the grain and other crops raised on the farm. Five hundred cart-loads of manure are thus made here annually, and never have we seen a more thrifty and profitable set of hogs, in any enclosure. The large cellar under the barn, which is connected with the hog-

yard by an under-ground passage way, furnishes a dry sleeping apartment to the hogs, and the materials for increasing still further the manure heap.

From the nature of the soil here, it may be doubted whether this manure, strong as it is, produces very permanent effects. Land so light and gravelly, needs a large admixture of clay, to retain the fertilizing properties of the animal manures applied to it. If this can be obtained on the farm, or at a short distance from it, it might be carted on in the fall and winter, and laid out in heaps, so as to be pulverized by the frosts, and then spread and ploughed in, in the spring. Clay is sometimes found on silicious soils a few feet from the surface, and by digging pits at proper intervals, where this is the case, a supply may be had, without much expense for transportation.

Mr. Page has also employed the pauper labor of the farm to advantage in reclaiming considerable tracts of low meadow lands—portions of which are yet waiting for similar improvements,—and in draining run-lands, both by surface ditches and under drains. We noticed one thing in the practice of Mr. Page—and we understand that it is not uncommon with the farmers and gardeners of Danvers, which has attracted much attention in England, and which is there claimed as the result of recent scientific investigations, but which has here been practised for years with good effects,—we allude to ploughing in manures in the fall.

The London Agricultural Gazette says that "Autumnal manuring, *immediately followed and covered by the plough*, is the most valuable discovery, perhaps, in its results, for which agriculture has been indebted to science." This statement is founded upon the experiments of Professor Way, "who has clearly established the fact that the soil has the peculiar property of absorbing and appropriating all those elements of manure intermixed with it, which are essential to the growth of plants." Knowing that this subject had been examined by Levi Bartlett, of Warner, N. H., and deeming it one of importance in farm management, we addressed a letter to him requesting his views and experience respecting it, and we annex his reply, as a highly instructive document.

The committee have to reiterate the old complaint, that so few of our farmers have been willing to come forward as competitors for the liberal premiums offered by this Society for farm management. They have been led to examine the Transactions, from the origin of the Society, to see what sums have been awarded for these premiums, and to whom and in what years, they have been awarded; and in the belief that some useful suggestions may be derived from the review, they herewith give the results of their examinations:

| | | | |
|---|---|---|---|
| Isaac Dodge, Hamilton, | 1821; | gratuity, | $10 00 |
| William Bartlett, Methuen, | 1822; | first premium, | 30 00 |
| Jesse Putnam, Danvers, | " ; | second premium, | 20 00 |
| " " " | 1824; | first " | 30 00 |
| Indian Hill farm, W. Newbury, | " ; | second " | 25 00 |
| Moses Newell, " " | 1826; | first " | 35 00 |
| Ira P. Perley, Newbury, | " ; | second " | 30 00 |
| David Gray, Andover, | " ; | third " | 25 00 |
| Nathl. Pearson, W. Newbury, | " ; | fourth " | 20 00 |
| Benj. T. Reed, Marblehead, | " ; | fifth " | 15 00 |
| Isaac Patch, Hamilton, | " ; | sixth " | 10 00 |
| Jacob Osgood, Andover, | 1828; | first " | 35 00 |
| Wm. Thurlow, W. Newbury, | " ; | second " | 30 00 |
| David Gray, Andover, | " ; | third " | 25 00 |
| Daniel Putnam, Danvers, | " ; | fourth " | 20 00 |
| James Pecker, Amesbury, | " ; | fifth " | 15 00 |
| Daniel Putnam, Danvers, | 1829; | third " | 24 00 |
| Amos Gould, Ipswich, | " ; | fourth " | 21 00 |
| Moses Little, W. Newbury, | " ; | fifth " | 18 00 |
| John Adams, Andover, | " ; | sixth " | 15 00 |
| James Stevens, " | " ; | gratuity, | 12 00 |
| Erastus Ware, Salem, | 1830; | first premium, | 30 00 |
| John Adams, Andover, | " ; | fifth " | 18 00 |
| Jesse Curtis, Marblehead, | 1831; | first } " | 26 50 |
| Matthew Hooper, Danvers, | " ; | second } " | 26 50 |
| Jedediah H. Barker, Andover, | 1831; | gratuity, | 12 00 |
| Joseph Kittredge, " | 1833; | second premium, | 27 00 |
| Thomas Chase, Rowley, | " ; | first " | 30 00 |
| Daniel Putnam, Danvers, | 1835; | first " | 30 00 |

| | | | |
|---|---|---|---|
| Joseph How, Methuen, | 1837; | first premium, | 30 00 |
| Erastus Ware, Marblehead, | " ; | second " | 25 00 |
| Christopher How, Methuen, | 1845; | first " | 25 00 |
| Daniel P. King, Danvers, | " ; | second " | 20 00 |
| Jonas Holt, Andover, | " ; | gratuity, | 8 00 |
| " " " | 1846; | second prem., | 20 00 |
| Daniel Pilsbury, W. Newbury, | 1847; | gratuity, | 10 00 |
| Leverett Bradley, Methuen, | 1848; | first premium, | 25 00 |
| Henry B. Newhall, Lynn, | " ; | third " | 10 00 |
| Joseph F. Ingalls, Methuen, | 1849; | gratuity, | 15 00 |
| Jonathan Merrill, " | " ; | " | 10 00 |
| Daniel Merrill, 2d, " | " ; | " | 10 00 |
| Simeon L. Wilson, " | " ; | " | 10 00 |
| J. F. Winkley, Amesbury, | 1850; | first premium, | 15 00 |
| Henry Poor, Andover, | " ; | second " | 10 00 |
| William F. Porter, Bradford, | 1851; | first " | 25 00 |
| Joseph Holt, Jr. Andover, | 1852; | gratuity, | 15 00 |

From this it appears that from 1821 to 1835, the first fifteen years of the Society's existence, there were twenty-nine competitors, and $675 awarded for farm management, while from 1837 to 1852 there were only seventeen competitors, and $283 awarded. Of these competitors, there were in Andover eleven, Methuen eight, Danvers seven, West Newbury six, Marblehead three, Newbury, Amesbury and Hamilton two each, Salem, Lynn, Ipswich, Bradford and Rowley, one each.

It would appear too that in 1826, '27 and '28, there was a large number of competitors for these premiums. In those years there seem to have been an interest and enthusiasm elicited in these premiums, such as have not been witnessed since. These were years, when the Committee had a duty to perform that required the exercise of sound judgment and discrimination, and from which they gathered much practical information to embody in their reports. But of late, so few have been the entries of farms for premium that there has been little for the Committee to do in the way of the examination and comparison of farms.

The remedy for this state of things, it is difficult for the Committee to see. They have no belief that increasing the

amount of premiums would call out more competitors; for in other Societies, Middlesex for example, where the amount offered is not so large as with us, there is no lack of entries of farms for premiums. A livelier interest must in some way or other be excited in these premiums, if we would draw out more competition and derive from them the full benefits contemplated in their offer. Public spirited men—trustees and other members of the Society, who are interested in its progress, should present their farms for premium. Let a dozen or more come forward this very year—not wait till some further improvements are effected, nor wait one for another to lead off, but each make it a point of duty that he owes the Society to volunteer in the cause, and there will be a beginning of the good times coming for the Committee on farms of Essex Agricultural Society. Let this be done for a few years in succession, and the diffidence or the indifference, whichever or whatever it be, that now rests, like an incubus, on our farmers in this matter, would be shaken off, and the example thus set would become contagious. We should then enter on a new era in our history, and be stimulated to devise new modes of offering premiums on farms.

Here we may say, that if attention was directed, in the examination of farms, to specific points, to be announced beforehand, competitors would be more ready and better prepared to enter their farms for examination, and the committees could make a more correct comparison between them. A scale of fourteen points might be framed, something like the following, no competitor to be allowed a premium for a farm under ten points.

| Article. | Points. |
|---|---|
| 1 Farm Buildings and Yards | 1 |
| 2 Manure and Compost heap | 1 |
| 3 Stock for quality and condition | 1 |
| 4 Tillage crops—Indian Corn | 1 |
| 5 " " Potatoes | 1 |
| 6 " " Roots | 1 |
| 7 Small Grain Crops | 1 |
| 8 Grass—on uplands | 1 |

| Article. | | Points. |
|---|---|---|
| 9 | Grass on reclaimed meadows - - | 1 |
| 10 | Ditches and underdrains - - - | 1 |
| 11 | Orchards and Kitchen gardens - - | 1 |
| 12 | Stone walls and other fences - - | 1 |
| 13 | Dairy products - - - - | 1 |
| 14 | Farm accounts - - - - | 1 |

For the Committee,

ALLEN W. DODGE, Chairman.

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JOSEPH HOLT, JR.'s, STATEMENT.

The farm offered for the Society's premium, is composed of the following parcels :—home place, twenty-seven acres; woodland, about thirty acres; pasture, (one mile and a half from home,) sixteen acres; meadow and woodland, (distant three and a half miles,) seven acres.

Twenty-three acres of the homestead, I inherited from my ancestors, together with the meadow and woodland. More than one half of the original of the home-land, I have subdued from a very rough, unproductive state; a number of acres of it have cost a hundred dollars or more per acre, before I put a seed into it. There was not a rod of good stone wall, on the place; I have rebuilt the whole of it. I think the whole length of wall that I have built, is three hundred and seventy rods; a great part of it is trenched from twelve to sixteen inches deep. My land is so much affected by frost, that a wall, however heavy and well laid, will not keep in place but a few years, unless the foundation is placed below the reach of frost. I have laid an under-drain through one piece of land about fifty rods, with a ditch four feet wide and three feet deep, filled with stone within eight inches of the surface.

The committee may think that I have made too large an outlay for a man with a small income, and no surplus capital; and I have frequently felt myself, that I might not, in my day, realize in dollars and cents, all that I have expended in this way; still, I think it will pay in the end. I have built noth-

ing that has been very expensive, My house is probably more than a hundred and twenty years old. I have repaired it at a cost of a few hundred dollars; put a cellar under my barn, built an addition to the barn, and a number of small buildings.

I have usually kept, for the last eight or ten years, one horse, one yoke of oxen, from three to four cows, and some young stock.

I have made, for the last few years, from thirty to one hundred cart loads of manure yearly. I have formerly used considerable meadow mud, but I begin to think that it does not do so well on our heavy, moist land, for a compost, as soil, or something that is obtained from dry land; yet I have no doubt that it is the right thing for many kinds of land. The manner in which I have applied manure, generally, is to spread twenty loads to the acre, when I seed down with grass. I have generally seeded down in the spring, and sowed oats or barley, but sometimes have sowed my grain in the spring, and ploughed in the stubble in September and sowed grass. When my grain has a very heavy straw, and falls before it is ripe, much of the grass that has been sown in spring, is destroyed; this is especially the case with oats. My corn I have always manured in the hill, and spread all that remained after sowing my grass and grain. My crops, the present year, are full middling, except the hay, in that I am cut short nearly one half—certainly more than one third, on my ploughed lands. My meadow grass was an average crop. I raised one hundred bushels of corn on two and one-fourth acres of ground; one acre was grass land, ploughed the last of November, the remainder was planted with corn, the year before. The crop on the part that was turned up last fall, was nearly one third heavier than the former, which is not common on our land. I can assign no reason for this, it being all manured alike, but I think the dry weather must have affected the old ground more sensibly. I do not recollect that my corn crop was ever injured by drought before, but a part of my field, I think, was this year. I raised seventy bushels of barley and oats on two and one-fourth acres; one acre of oats, forty bushels; one and one-fourth acres of barley, thirty bushels. My potatoes were

sound, but the yield was not great. I planted one-half an acre, and raised seventy-five bushels. I have milked, this year, four cows, and made, through June, July, and August, twenty-two pounds of butter per week. My orchard is all young,—most of it has just commenced bearing. I have raised, this season, fifty bushels of market apples—Baldwins.

Andover, Nov. 16, 1852. JOSEPH HOLT, Jr.

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LEVI BARTLETT'S LETTER.

Warner, N. H., Dec. 3, 1852.

Allen W. Dodge,—Dear Sir: The experiments of Professor Way seem to throw much light upon some things connected with agriculture, that were previously rather dark, and not so easily comprehended. Still, I do not think Prof. Way's experiments, *alone*, fully explain the whole phenomena of the fertility of naturally rich soils. We are, I think, equally indebted to Liebig and Dr. Krocker, for an explanation of a portion of the facts Prof. Way's experiments have proved. Liebig made the discovery of the existence of ammonia in rain water, and Dr. Krocker has, by his analysis, proved the existence of a large amount of ammonia in the soil; and Prof. Way has shown the capacity of the aluminous portions of soils, for retaining—fixing, as it were,—the salts and gases, so necessary in rendering a soil fertile. Says Prof. Way, this "is a very wonderful property of soil, and appears to be an express provision of nature;" "a power," he remarks, "is here found to reside in soils, by virtue of which, not only is rain unable to wash out of them those *soluble* ingredients forming a necessary condition of vegitation; but even these compounds, when introduced artificially by manures, are laid hold of and fixed in the soil, to *the absolute preclusion of any loss either by rain or evaporation.*"

I must beg leave to be excused from *going* the *whole figure* with him, in the above strong assertion. Take, for illustration, a strong clay soil, that has been thoroughly underdrained, and then put upon it twenty-five loads per acre, of cattle ma-

nure from a barn cellar, spread and plough it in, let a heavy rain follow, and I think the waters running from the drains would show by their color, taste, and smell, that some of the compounds (artificially introduced into the soil by manures) had escaped with the water and were entirely lost. Then let the sun burst out so as to cause a rapid evaporation from the soil, and would not some of the ammonia again take wing and escape into the atmosphere? I so opine; but that an aluminous soil, possesses a vastly greater capacity for retaining the fertilizing qualities of manures, than a silicious soil, there can be no doubt.

You ask the results of my practice in fall manuring. In the spring of 1847, I planted about one hundred rods of inverted sod land with corn, the soil a strong yellow loam, the manure was all applied upon the surface, and harrowed in; a fair crop of corn followed. Soon as harvested, I prepared the ground for sowing winter rye; by (a-la-mode Phinney,) the use of the cultivator and harrow; rye, herds grass, and red top were sown, (as I was residing in Boston, there was no clover seed sown in the spring as I intended to have had done.) The crop of rye was good, but the prospect for future hay crops was bad, and I concluded to plough up and plant again. I left Boston first of June, 1848, and soon after, happening into one of our stores, the owner remarked to me that he had a lot of damaged salt fish, and if I could work them up into manure, I might have them in welcome. The next day I sent my team after the fish; there were about five quintals, these were placed in alternate layers, with about five cartloads of fresh dug muck; in a few days there was a strong smell arising from the heap; first of September shovelled over the pile and found but few traces of the fish remaining. Late in the autumn this was hauled on to the rye-stubble being about six common cart-loads, and as many more loads of manure from the barnyard, all of which was spread and ploughed in. In the spring, about a dozen loads of green, winter-made manure were applied, and cross ploughed; the result was the best crop of corn I ever raised; the corn came up and went right ahead, to the end of the season.

I have since pursued the same course in using the manure that I have on hand every fall, thinking if there is a small loss either by leaching or evaporation, it is not so great as the extra expense of carting out in the fall, and piling up in trig heaps, as manure should always be, if destined to lie over winter. But my practice till this autumn, has always been to apply the manure in the fall to *loamy* soil. The past season, I had an acre of land planted with potatoes; most of this field was of a sandy texture. After the potatoes were dug and the tops removed, I carted on to this acre twenty-two loads of manure, spread, and then harrowed the ground with a heavy harrow. Next spring I shall add more manure, and use the cultivator and harrow only, so as not to disturb the inverted sward, and plant with corn. There may be some loss of the manure on this sandy soil by leaching; but I do not think it will be equal to the expense of having to remove the manure next Spring, as is usually practiced by most farmers. If you have sandy soils, upon which you wish to apply manures in autumn, I think you would not suffer much loss in carting on fine manure (whether it is stubble ground, or inverted soil,) and working it into the surface soil, by the harrow and cultivator. Yours truly, LEVI BARTLETT.

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## FATTENING CATTLE AND SWINE.

In the absence of any statements of competitors for the premiums offered on this subject, the Chairman of the Committtee would communicate some facts within his experience, relating to the management of Cattle and Swine. Our annual custom at the Town Farm, in Danvers, has been for a number of years past, to keep four oxen for labor on the farm, for which we find constant employment; and we usually purchase those in working condition, and of a large size. They are fed with the products of the farm and Indian meal, giving them from four to six quarts of meal per day; generally the latter quantity after the first three months. Their skins are kept clean by the use, every day, of the card and brush. This I think

important, and should not be neglected. Their stalls are plentifully littered with straw, or meadow hay, and thus are kept dry and comfortable. They are and should be, driven carefully and treated kindly, and never subject to blows, kicks, nor any harsh treatment whatever. *Kindness and care* should ever be the motto of the teamster.

With this amount of labor that they perform under such treatment, we generally find them, in from four to twelve months, fat. We then turn them for beef at the highest market price, and they return us from twenty to fifty dollars a pair more than their cost. We have considered this one of the most profitable ways of keeping cattle.

The management of our Swine at the Town Farm, has so often been stated, that I have not anything new to communicate; but as these few remarks may come to the notice of those who are not familiar with our management I will briefly state it.

We have a yard covering about half an acre of ground, in which our swine are kept. It is so constructed as best to facilitate the making and preservation of manure. Care is taken to have a full supply of meadow mud, and other materials collected on the Farm, for the operations of the swine. In this way there is annually made more than a hundred cords of valuable manure. This adds much in increasing the crops and improving the condition of the Farm. We replenish our stock of swine twice a year by purchasing usually from Brighton Market from seventy-five to eighty Pigs, of about a hundred pounds weight.

Care is always taken to select the most promising from the droves there for sale. After keeping them about six months, we find them to weigh from two to three hundred pounds. Much of their feed is furnished from the offal procured from slaughter houses in town. This offal adds essentially to the quantity and quality of the manure. Attached to the yard are sheds to protect them from the weather and there is a convenient house fitted up with troughs for feeding them. Most of the labor in collecting the materials for manure and taking care of the swine, is performed by the inmates of the House,

so that it is done without much expense. I would say that I think it important that hogs should have a place to lie where they can be free from wet or dampness, for unless they have a dry bed they will *not fatten.* The present year we paid seven cents per pound for pigs, the pork was sold at eight and one half cents per pound, yielding, we consider, a fair return and a good profit. WINGATE MERRILL, Chairman.

Danvers Nov. 13, 1852.

## MANURES.

The Committee on Manures report that no entries for premium on that subject, have been made the present year. Your committee regret that so important a subject should not have been brought to their notice by those who have made experiments on manures, so that others of less experience might have the benefit of their knowledge.

But lest the subject should pass without note or comment, I will give my own method of increasing my compost heap, though I do not expect to advance any new views.

In the first place, I cover my barn yard and cellar with peat mud and soil, to the depth of six or eight inches, and yard my cattle through the summer and fall, upon it. Late in the fall I give it another coating of mud, about the same thickness as at first, where it remains till spring. By thus managing, the liquors are all absorbed, and the droppings from the cattle become pretty well incorporated with the mud during the winter. It is true, by the above practice, I find it a little inconvenient getting about the yard at some seasons of the year; but when the yard becomes too wet and soft, I obtain, if possible, a few loads of coarse manure from the stables, and spread over it, so that the cattle may tread it into the mud.

In the spring, I have it thrown into large heaps under the sheds in the yard, (which are made almost expressly for this purpose,) and barn cellar,—where it remains a few weeks, when it is forked over, breaking the lumps fine, and making it fit for use.

I also keep a quantity of soil at a convenient distance from the sink room, to receive the soap suds and waste water from the house. This I replenish several times during the year, and it makes a valuable manure for top dressing grass lands. By this management, I make a much larger quantity of manaure than I can obtain in any other way, for the same cost.

From the little experience I have had with manure composted as above, I am confident that I get as good crops as I did when I used green manure altogether.

LEWIS ALLEN, Chairman.

Danvers, Nov. 25, 1852.

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## FLOWERS.

The Committee on Flowers awarded the following premiums:

To G. J. Thornton, of Andover, for a magnificent Cone of Cut flowers. This Cone was six feet in height, and five feet in diameter at the base, and was a striking and beautiful object, - - - $4 00

Mr. Thornton also presented other cut flowers of much beauty.

" Mr. Flynn, gardener of C. S. Storrow, Esq., of Lawrence, for sixty specimens of Dahlias. These were exceedingly well grown, and beautiful flowers, 3 00

" John Hart, for forty Dahlias; twelve Fuschias in pots and in full bloom; Balsams in plates, and other flowers, from garden of Gen. H. K. Oliver, of Lawrence, - - - - - 3 00

The above constituted nearly the whole of the floral exhibition of the Fair. The committee regret that so limited a show was made, but at the same time feel the justice of awarding much praise for the beauty and perfectness of the flowers shown, especially of the Dahlias.

These, it is safe to say, were of the very highest order, in shape of the flower, and distinctness of coloring and tint. The tipped flowers were exceedingly well marked. The Fuschias

and Balsams were likewise first rate of their kinds,—many of the latter being as large as a Monthly Rose.

The Committee are well aware of the limited attention which floriculture receives at the hands of our farmers. In this respect our rural population is far behind that of England, and of France. There you hardly pass a cottage, even of the humblest kind, that is not adorned with a border or two of flowers, roses, daisies, tulips, or iris, and which has not climbing plants,—jessamines, and roses, and honeysuckles, in full flower, crowning its windows and porches, and hanging like pictured tapestry, about the walls.

Mrs. Howitt, in her most interesting work, "Rural life in England," says that "many cottagers are most zealous and successful florists—that the number of flowers now cultivated by them is much increased," and she names "the Polyanthus, the Auricula, the Hyacinth, Carnation, Tulip and Ranunculus, and the splendid Dahlia and Pansy." She speaks, too, of the "many picturesque rustic huts, built with great taste and hidden by tall hedges, in a perfect little paradise of lawn and shrubbery,—delightful spots to go and read in of a summer day, or to take a dinner or tea in, with a pleasant party of friends." Many such spots as these belong to the poorest class of the English rural population, and it is only to be lamented that, too often, the house is more interesting than the beer-drinking and drudging man that lives in it.

The flower-patch in front, and the garden in the rear, seem to be, as is most natural, the special province and care of the mistress of the household. See here, what a pretty little picture, Olmstead, a farmer of Staten Island,* gives of a garden attached to an English cottage in Herefordshire;—"three large evergreen trees grew near the end of the house, so that, instead of the plain, straight, ugly red corner, you see a beautiful, irregular, natural, tufty tower of verdure. Myrtle and jessamine clamber gracefully upon a slight trellis of laths over the door; roses are trained up about one of the lower windows, honeysuckle about another, while all the others, above

* "Walks and Talks of an American Farmer in England," by F. L. Olmstead, of Staten Island, N. Y.

and below, are deeply draped and festooned with the ivy. There was a pleasant garden, with some very large and fine Pansies, some Roses, and great promise of more. It was extremely neat, clean, and finely kept, and it was the pride of the mistress that she took the entire care of it herself. As we walked, she had her scissors in her hand, and she cut flowers, and when we were seated in a curious little arbor of clipped yew, where she had left her work, when she came in to see us, she arranged little nosegays, and presented them to us."

Now should we often witnoss such a scene, and be received and regaled in just such a way, in an American cottage? There would be the cheerful welcome of the heart, and the bounteous hospitality of the freely-spread board, but the "honeysuckles, and the pansies, and the roses, and the jessamines," would seldom cheer the weary wanderer's spirit, or beautify the feast. We are so eminently practical and utilitarian, that in the severe discipline of the work-a-day-life that we lead, we too much abandon all regard for the beautiful and curious in art. Painting and sculpture, and the high ministrations of refined and elaborate music, have but little influence upon us, money-loving and intense toilers that we are. Men of the "muck-rake," of whom Bunyan speaks, in that wonderful book, the "Pilgrim's Progress," we seem to "look no way but downwards, raking at the straws and small sticks, and dust of the floor," to turn them into the barter and traffic, and the merchandise, whereby cometh the gold and the silver, and the lucre of gain, the love of which, crowding into and monopolizing all the heart that is in us, crowds out and destroys all love of the beautiful, and almost all love itself, for God and for man.

Why should we be so exclusively and so extensively practical? Why should we banish every thing from life, but weary toils and corroding cares? Why take we so much "thought of what we shall eat and what we shall drink, and wherewithal we shall be clothed," considering so little "the lilies of the field, that toil not, neither do they spin," and yet surpass all the glory and the glitter, and the gorgeousness of great Solomon's apparel! Why should we kill out, by the tiresome operativeness of our drudging life, all that is beautiful and poet-

ic? Ah! whither have fled, the "woodnymphs wild," that peopled the groves of Attica, and hovered around the hills and woods of Greece? Come back, ye Graces and ye Fauns! Come back, ye Dryads, to our oaken groves, ye Nereids to our streams, ye Oreads to our hills! Come back,

"Ye Naids of the wandering brooks,—
With your sedged crowns and ever harmless looks"—*Shakspeare.*

"Ye yellow-skirted Fayes,
That fled—leaving the moon-lov'd maze,"—*Milton.*

"Come live with me and be my love,
And we will all the pleasures prove,
That hills and valleys, dales and field,
And all the craggy mountains yield;—
And I will make you beds of roses,
With a thousand fragrant posies,
A cap of flowers and rural kirtle,
Embroider'd all with leaves of myrtle."—*Shakspeare.*

A little infusion of poetry, a litttle culture of the love of the beautiful, a little time given to its pursuit in the varied and beautiful forms in which God hath robed the woods, the fields, the leaves and the flowers, can do no harm. Will they not rather do much good, in softening, and refining, and hallowing the feelings? Shall we not be made to partake of a new and more glowing tenderness of heart, and more warm and impassioned love of nature and of nature's God? What is there that more than a flower, evinces the wisdom and the power, and the love of God? What is there that more fervently kindles and sustains the glowing gratitude that warms the heart of one who

"Sees God in clouds and hears Him in the wind!"—*Pope.*

Nay, who sees Him in everything, and who feels and knows that "GOD IS LOVE," than the contemplation of beautiful flowers? For even He the mighty God, the everlasting Father, that was not in the great and strong winds, nor in the earthquake nor in the fire, but in the still small voice, "*is more to be found* in the beautiful, than in the sublime,—in peaceful quiet repose, than in the tumultuous noise of the Kingdoms," —in the pattering rain and softer—falling snow, than in the hurricane, the storm, the tempest and the thunder!

Cherish then the beautiful in nature and in art, and if you cannnot (and few can,) cherish it in costlier sculpture and painting, you may easily and cheaply cherish it in those sources from whence the "human arts divine" have derived their most perfect types and patterns, cherish it in floriculture and in flowers. And a knowledge of this culture is so easily acquired, and its practice is so simple, so gratifying, and, at the same time, so exciting and so enchanting, and springs up so readily under the least encouragement, that we wonder that men and women do so greatly neglect it.

We wonder that about every farm house and cottage and even shanty, that has the smallest space about it to spare, there are not found, in all the beautiful sequence of their flowering, the tiny Snowdrop and Crocus, that early pop up their pretty heads through the snow-wreath to kiss the mild spring sun, or the vernal Phlox, or white and yellow Primrose, or the crimson and blue and rosy Auricula, with its many flowered blossoms, in magnificent disproportion to its little stalk, shooting out their lovely petals to welcome the "great god of day," or "sweetly blushing Hyacinth,"* enriching the perfumed air with its dew-covered campanulous flowers, that sparkle in the glowing beams of the morning,—or gaudy Tulips, bizarre, and rose-colored and feathered,—justly crowned "King of Flowers," with its interminable variety of tinted shades and colors,—or later summer Snap-dragons, and "Daisies pied and violets blue," and Bell-flowers and Balsams, Larkspurs, Sweet Williams, Iris, Pæonies, and Asters,—and (if there be a King, so is there, as Sappho sung, a "Queen of Flowers," the

> "Blushing Rose with virgin streaks,
> That paints the down of Venus' cheeks.—*Anacreon.*

and the great, gorgeous. autumnal Dahlia, high up on its stiff foot-stalk, looking all about the neighborhood,

> To see
> If there can be
> Aught gaudier than she!—*The Committee!*

Requiring the smallest amount of care and time to their successful growth and flowering, we wonder that they are all but

* "Suave rubens hyacinthus."—*Virgil.*

unknown about the country houses, and not only so, but that we can scarcely find the baldest apology for a garden. Now "good friends, sweet friends," (as said Mark Antony, when he harangued the Roman crowd,) let us try to persuade you, for the sake of the lone hours of the good wife and the dear children, and to cheer them up while you are

"Over the hills and far away,"

to do something for them, in the way of a garden and a few flowers.

But let us come down to the practical and see how to bring a garden to pass. I take it, good neighbor, that you are willing to spare a small patch, and are further willing to dig it up and enrich it with some of the best compost from yonder two-year old heap of muck and meadow mud, well rotted and broken up, as it must now be. Well, dig it in and spade it down, and shake it up, and turn it over and over again, let it settle down a few days, and then lay it out in beds. If you choose, long rectangular, yet narrow beds will do, so that the middle of them may be easily reached from the path on either side. Or if you have a geometrical eye for circles and semi-circles, and triangles and diamonds, and ellipses, shape out your beds in those forms, and then turf the edges of the beds with narrow strips of turf, the grass of which must always be kept closely shaven, and not be permitted to intrude upon the beds. Then fill up your alleys with the finely sifted ashes of anthracite coal, if you have it, or with gravelly loam, to keep them dry. Now in the borders of these beds, you may put your *Iris*—or *Fleur-de-lis*, (*flower-de-luce*, it is often called,) of which there are more than a hundred varieties, many of them exceedingly beautiful. Intersperse them with *Phloxes*, in varieties,—with *Canterbury-Bells*, purple and white,—with *Fox-Gloves*,—with *Sweet-Williams*, taking care to renew these biennially,—with *Bee-larkspur*,—with *Pinks*,—with *Primulus*,—and *Trollius*. You may also put *Hyacinths*, and *Gladioas*, (both *communis* and *floribundus*,) but be careful to take these last up before winter, as they would be killed by the frost. In each end of your rectangular beds, if you adopt that form, you may plant your *Pæonies*, of which you will need

some half dozen varieties, say the *Humei*, *Whitleii*, *Fragrans*, *Revesii*, *Potisii*, *Festiva*, *&c.* These are all perfectly hardy. You may also put into your borders, unless you prefer to make a regular bed of them, a goodly show of *Tulips*, putting them, (if in the border,) in groups of a dozen or so, in a small circle, say eighteen inches in diameter, with one or two near the centre, and the rest in the circumference, say six inches apart.

If you prefer planting them across a bed, select a portion of any length you choose, and about four feet wide. Make the soil of this part not by any means rich, but let there be a rather good share of sand dug in, for if it be too rich, the colors of your tulips will run into each other, and mar the beauty of the whole. After the bed is ready, let it settle down for few days, —and then, (October is the time for planting Tulips, and rather late in the month,) with the end of a round stick, make a row of holes seven inches apart, down the middle of the bed, and then on *each* side of this central row, make three other rows, seven inches from row to row, and seven inches apart. You will thus have seven rows; and into each hole drop a Tulip, to such a depth that the top of the Tulip shall be four inches from the surface of the ground. Cover them in and leave them for the winter, protecting the bed with some loose litter from the stable. When the returning sun shall have opened the gates of spring, take off the litter, and let the Tulips start to the air, and by the middle of May, you shall have a sight "*guds for sair e'en*," as the Scotchman said. Careful cultivators take them up every year, about the last of June, others let them stay a year more. When taken up, the bulbs will be found to have multiplied. Put them away in a dry place, till October, when plant again as above. When you buy your Tulips, *never buy at auction.* In fact, never buy any bulbs or plants at auction, unless you have a fancy for being cheated. *Believe one who has tried it and suffered.**

Across one of the beds, in drills six or seven inches apart, you may sow, in the month of October, for blooming in the next summer, the seeds of the *Rocket Larkspur*, and nothing in your garden will make a finer show. Sow also, in early

* Credite experto —*Virgil.*

spring, seeds of the best double Balsams and China Asters, in varieties. These will give you a beautiful show of flowers through the summer and fall. Forget not the double Holyhocks.

In the middle of your beds, and about the first of June, put out your *Dahlias*, and the lists annually published, will supply you with some beautiful plants. The Dahlia needs a soil of, say, one part sand, one part good loam, and one part old rotten manure. Dig holes about a foot deep and a foot square, and into these put the above soil and the bulbs. As the plants grow, tie them to stakes, to secure them against being broken down by the wind. The stalks are very tender. When the frost shall have killed the tops, cut them to within six inches of the roots, dig these up carefully, do not divide them, but put them away in a dry place, secure from frost, till the next spring. They keep well in dry sand or sawdust. When spring opens, you will find that the new shoots are starting from the crown of the old bulbs. Divide them carefully, leaving a bulb to each eye, and plant them again as before.

You will also keep your bulbs of Gladiolus, where they will not freeze, and when the spring loosens the frozen soil, plant them again. A very few seasons will greatly increase your stock, so that you will have some to sell or *to give away*.

You will find, also, the family of the *Lily*, to be very beautiful and entirely hardy. Of the *Phloxes*, of which we have already spoken, there is a very great and beautiful variety, any dozen of which, selected for you by some floral friend, or by a reliable seedsman, cannot fail to delight you.

For your annual flowers, the seeds of which you will gather as they ripen, and sow every spring, you may plant Asters, Balsams, Ipomœas,* Zinnias, Snapdragons, Portulaca, Pansies, Nasturtiums,* Morning Glory, Mignonette, Marigolds, Hibiscus, Amaranthus, Escoltia, Gillia, &c. &c.

But above all, be sure that you have the Rose, known in all time, and admired wherever known; sung in loudest and sincerest praise, by poets of all ages, sacred and secular; dedicated to Venus, goddess of beauty,—to Cupid, god of love,—to Aurora, goddess of earliest dawn,—sacred emblem of silence

* Climbers, and need supports to run upon.

and trust,—hung in ancient time above the festal board of sworn friendship, a custom still known to us as emblematic of confidence and secrecy, by our common phrase of "sub rosa" —"under the rose." In the scripture, frequent mention is made of the rose. The desert was to blossom as the rose," and there was the "Rose of Sharon," and the "Rose of Jericho." In Ecclesiasticus is this passage, "Hearken unto me, ye holy children, and bud forth as a Rose growing by the brook of the field." The gay Anacreon calls the Rose "the most beautiful of flowers,"—"the delight of the gods," the favorite of the muses." Hear into what a rapture of song he breaks forth, upon this, his most favorite theme!

"Rose, thou art the sweetest flower,
That ever drank the amber shower!
Rose, thou art the fondest child,
Of dimpled spring, the wood nymph wild.
Even the gods that walk the sky,
Are amorous of thy scented sigh;
*Then bring me showers of roses bring,*
*And shed them round me while I sing.*"

Homer uses it in his figures; Sappho, the lyric poetess, was enamored of it; and the Latin poets, Virgil, Ovid, and Martial, all speak of its praises. Who can ever forget Virgil's reference to the old Corycian gardener:

"Who gathered earliest Roses in the spring,
And from his trees the richest fruits did bring."

The cultivation of flowers, and especially of the Rose, by the Romans, was carried to the utmost excess. Their festal rooms were strown with its leaves, and the statues of their Gods were crowned with chaplets of Roses. Nero, spent $150,000, in procuring Roses enough for a single feast, a shameless and wicked prodigality, yet perfectly characteristic of this debauched wantonizer and execrable tyrant.

But the developement of this beautiful Flower and its elaborate culture was left for the moderns, and English and French Florists have vied with each other in the production of new and splendid varieties, by hybridizing, entirely unknown to the ancients. The hardy kinds only, are those we commend for culture in the Farm-garden, and we append a short

list of the best and most reliable. When you set them out, give them well broken up and new rich soil, and, of both the Rose and of the Dahlia, mulch the roots with stable-litter during their growing and blooming seasons. The list contains well-known kinds that have been abundantly proved and are known to be excellent. You will find them, any and all, at the celebrated Rose-garden of Messrs Putnam, of Salem.

| | |
|---|---|
| Baron Prevost, | Rivers, |
| Cup of Hebe, | Eliza Mercœur, |
| Mrs Elliot, | Madam Pisaroni, |
| Blanchefleur, | George 4th. |
| Madame Plantier, | Princes Clementine, |
| La Reine, | Count de Brobinsky, |
| Madam Laffay, | Prince Albert, |
| Giant of Battles, | Village Maid, |
| Luxembourg Moss, | Aglae Alanson, |
| Princess Adelaide, | Kean, |
| Persian Yellow, | Queen of Prairies, |
| Great Western, | Baltimore Belle, |
| Mogador, | Amadis, |
| Cristata, | Inermis. |

The last four are climbing Roses and may be trained against some part of your house, or by the side and over a door or window, or against a stout pole securely fixed into the ground. A young pine tree stripped of its branches, but not of its bark, and standing eight to ten feet high, answers very well indeed.

And now we have "said our say," about the flowers, and we hope not in vain. We have written not for the floral-wise, but for those who have not yet cultivated. Our farmers' wives and daughters, (and why not their sons?) have undoubtedly a taste for flowers, and that taste need but be awakened and educated, to make the grounds about their homes "to blossom like the rose," and to glow with brilliant beauty, filling the summer air with the rich odor of

"The bee's ambrosia out of balm-breathing flowers."—*Theocratus.*

All which the Committee respectfully submit, by

HENRY K. OLIVER, Chairman.

The Committee on Essays, Gardner B. Perry, chairman, awarded the premium of ten dollars to David Choate, of Essex, for the following

## ESSAY ON SHEEP HUSBANDRY.

It does not necessarily follow that the writer of an Essay on a given subject, should advocate changes and innovations in regard to it. As much good service is often rendered, by advising people to "let well enough alone," as in any other way. *Speculations* are sometimes synonymous with *losses*, and were not farmers generally amongst the last to be convinced of the utility of change, it might be positively injurious to argue in favor of new or modified methods of husbandry. It is not the object of this Essay professedly to advise the farmers of Essex County to go largely into woolgrowing, and yet if it should clearly follow from this humble effort, that something further should be attempted in the matter of keeping sheep, by a moderate expenditure, annually increased for a few years, until the experiment should be fairly tried, it will not surely be cause of regret.

Various causes concur, to make it difficult to suggest any rule, which will apply to all parts of even the County of Essex. *Land in the neighborhood of market towns is too valuable for keeping Sheep.* This is well understood by farmers. Even in Amesbury, although there were 27 sets of woolen machinery in that town in 1837, there were but 498 sheep kept, for the reason no doubt, that the milk of the cow at Newburyport market, would pay better. The town of Beverly had but 100 sheep in 1837, being within a mile of Salem, and Danvers only 50, while Boxford had 484.

And again, some kinds of sheep require more expensive keeping than others do. So also much depends upon the leading object for which sheep are intended to be kept—whether for the wool or the carcass—and again whether for fine or for coarse wool.

It will be safe, in general however, to lay down the broad principle, that Essex County is not the place for extensive

woolgrowing.—Mr Jewett, an American woolgrower, has recently imported French sheep which shear 21 lbs each, at an outlay of some 30,000 dollars, but that is in Northern Vermont, and there, sheep may be pastured at two to three shillings each, while 90 cents each is as low as it can be done for in our County.

Still, when it is recollected that in 1845 there were 16 woolen mills in this County, with 103 sets of machinery, working up 2,292,500 lbs of wool annually, and that there should have actually been but 15,638 lbs of wool grown, we are struck with the fact, that contiguity to the market is not always sufficient to produce the supply for that market. And although a "free trade" interchange of products is sometimes the best of economy, yet there is a favorite theory lingering in most New England minds, that *you should never buy what you can raise,*—or conversely, *raise everything you want, if it will grow.* It does not follow because a family have 50 lbs of wool, that they should therefore manufacture it into cloth. The mills may do this cheaper and better.

Before discussing the question whether sheep husbandry should have a larger share of attention in Essex County, on account of the wool, I wish to remark that there is one case at least, in which it would be a good investment to keep sheep, without regard to either the wool or flesh. It is where pastures are bushy and shrubby. No common vegetable will stand before a flock of sheep kept sufficiently short.* The thousands of acres of pasture land, so full of blackberry vines, blueberry bushes, whortleberry bushes, and what not, defying the cow and sometimes crowding her out entirely, may be subdued in a few short years by overstocking with sheep. The sheep need not be made poor by it, where it is convenient to fence off a portion at a time. Put twenty sheep on to a four acre lot for a month, and then on to another such lot: then back, and so on, alternately for six months. In three years, all biennials will disappear, if the leaf be taken off as fast as it grows. If the sheep come to

*Sheep will feed, says a naturalist, upon 400 different vegetables, which no other animal but the goat will do.

the barn poor, a gill of corn a day, with common keep, will bring them up by spring. That the sheep is dealt with somewhat severely, I do not deny; it is the price we must pay, for the benefit of the pasture. Where the only object is to destroy weeds and bushes and prepare the pasture for the cow, a low priced sheep may be employed, and after the object is accomplished, the sheep may be fattened or sold as store sheep. But the improved appearance of the pasture is not all. The sheep enriches land beyond any other animal; its manure being stronger and more stimulating.

The popular objection may be, that the close feeding necessary for accomplishing the object, would drive the sheep over common fences. This may be; but walls can be polled, and sheep fettered, a thing often necessary to be done, even where the food is good. Some pastures have the Canada thistle, and sheep suffer from this exceedingly. I have known them made sore with festers over the body, arising from the thistle working itself through the wool, till it reaches the flesh and then into the flesh. They must then lose flesh from the irritation. If such pastures could be over-stocked, however, with sheep, the thistle would be overcome, and exterminated easily, and where land is rocky, it is the only way in which they can be.

## SHEEP WITH COWS.

It was the declared opinion of the late lamented Asa T. Newhall, that in every pasture stocked with cows, as many sheep as there are now cows may be added to the number of cows without detriment. The sheep bites closer, and in many places where the cow cannot. Besides this, the sheep will feed on the leaves of vines and bushes which the cow rarely touches. Here there is an opportunity for raising the stocking yarn and mitten yarn for the family without feeling it. And no farmer who has tried the yarn of the shops, chopped off by machinery, can but desire the stockings and mittens for himself and his sons, made of yarn, carded, spun, and knit at home, or at least by hand.

Where but few sheep are to be kept, and those with cows, it is desirable to have cossets. Lambs for this purpose may

be bought cheap out of every large flock, in the spring, which the dams will not own. Even cossets, however, will stray away from the cows, if there are many of them, and form a flock by themselves.*

THE KIND OF SHEEP FOR OUR COUNTY.

As sheep cannot, probably, be profitable here for the *wool* alone, on account of the price of land, it is important that that kind should be selected which is best for meat, or for meat and wool combined. The Leicester sheep is one of the largest, and fattens well. The wool is also in its favor, being long and soft, and the fleece heavy, and will sell as quick at the factory as the Merino, if not quite as high. The truth is, our country imports more coarse wool than fine. The attention of wool growers has been arrested chiefly to the culture of *fine wool*; and although we have, after all, comparatively but little of the very finest, we have almost as little of the wool suitable for carpeting. Hence it follows, that our wool intended for *sale*, should be of the coarse kinds, and these we find upon the Leicester sheep. A modified quality may be obtained for common family use by a mixture with the South down; indeed some extensive wool growers prefer this for every reason.

The pure Leicesters shear from six to eight pounds a year, and will always sell at the carpet mills.

FUTURE SHEEP HUSBANDRY IN OUR COUNTY.

As wool must be in some demand, and good mutton and lamb in probably great demand, I look forward to a large increase of sheep, as an event not very distant. By the returns of the marshals, as they were published in the Statistical Tables for 1845, there were at that time but 4892 sheep in the county,† yielding 14,342 pounds of wool. In the same year, there were 21,166 neat cattle kept in the county. Now if the sober judgment of the late Mr. Newhall, before quoted, was correct, there might have been as many sheep pastured, as

* I purchased a fine cosset three years ago, and in the fall, a buck from a flock. The cosset kept with the cows, and so compelled the ram to do for company. A ewe from a flock was afterwards added, and even then the cosset could not be induced to leave the cows, and the three kept together. Next summer, however, when they were sent to a distance for pasture, and a flock of sheep were in the adjoining pasture, mine left the cattle and joined them.

† In 1837, the number was 5837, showing a decrease of 945 in eight years.

that number of neat cattle, without injury to them, viz: 21,166, instead of the 4,892 actually kept, and yielding 60,000 pounds of wool. At thirty-five cents per pound, this wool would have been worth $21,000, instead of $5,019, the actual value. I have proceeded thus far upon the supposition that there should be no reduction in the number of neat cattle kept. But is it clear that the keeping of neat cattle is always at the greatest profit? Let us compare the keeping of cows and sheep, for a moment.

A given pasture will carry ten cows. These cows may on an average, yield six pounds of butter a week, for six months, without meal or other extra keep. At 23 cts per pound this will, for the ten cows, amount in six months to 358 dollars. Ten calves, at $4,50 each, amount to 45 dollars, the whole making 403 dollars. Estimate the expense of a dairy woman, including board at two and a half dollars per week, or 65 dollars for the season, and the expense of milking and driving the cows, at the same rate per week, being 65 dollars more for the season. Deduct these expenses, from the value of the butter and veal, and we have $273 for the net income of the cows.

Now for the sheep. The same pasture, by the usual mode of reckoning, will carry 50 sheep. They will yield three pounds of wool each. At 35 cents per pound, this will amount to $52,50. I estimate the number of lambs to be 70. These at two dollars and fifty cents each, are worth 175 dollars. The wool and lambs are consequently worth $227,50. The next item to be considered, is the gain of the flock by fattening. The sheep must be supposed to have the same advantage from fall feed that cows usually do. The flock will then be fit for the butcher in autumn. I will only suppose two fat sheep to be worth three store sheep. The flock of 50 now becomes 75. We now have the positive gain of 25 fat sheep. At $2,50 each, these are worth $62,50.

The account now stands thus—

| | |
|---|---|
| Income of the sheep, | $290 00 |
| Income of the cows, | 273 00 |
| Balance in favor of sheep, | $17 00 |

I have reckoned the lambs at $2,50 each, only. Take the price offered to Dr. Kittredge, for his lambs this year, viz, four dollars each, for a standard, and how rapidly does the balance increase, in favor of sheep.*

OBJECTIONS ON ACCOUNT OF CLIMATE CONSIDERED.

The advocates of Southern sheep husbandry, triumph in the idea, that a climate like theirs, allowing sheep to run at large through the winter,† is the only one where sheep can be raised to advantage. But is there no substitute for a Southern climate? "The great subject of shelter" says Ex. Gov. Everett, "has not been enough considered. Whenever you cut down a large piece of woodland, you change the climate of the tract of land which was shielded by it. When you clothe the summit of a hill with a thriving plantation, you make a milder climate for the slope. In short, if any one doubts the extent to which climate consists in shelter, let him remark the difference between the north and south side of a high compact wall, when the snow is going off in the spring, you will have a little glacier on the north side of the wall, and dandelions in blossom on the other."

*Shelter for Sheep*, during five months of the year, will give the climate they need even here. But the sheds should be impervious to rain. A tight roof is far more necessary than enclosed sides. A cold rain kills more sheep and lambs than any degree of dry cold.‡ Almost the whole expense of shedding should be laid out in the roof. The sides indeed should be such that the sheep may be kept in, but except on the north and east sides, the work should be such as will admit the sun freely.

Sheep need to leave the sheds and yards occasionally for browsing and grazing, but after winter really sets in, this should be done seldom. When the ground is bare, they will find enough to keep them picking without satisfying them,

* I might have allowed cows to average more butter, and calves to be worth more, and still leave a balance for the sheep.

† See the "Plough, Loom and Anvil," for Jan. 1851.

‡ Even in the climate of Ohio, "thousands of sheep died for want of protection from the cold rains in the early part of winter." See the Wool Grower, published at Buffalo.

and yet enough to take away the appetite for hay. Such feed as the sheep find at large, proves laxative to them, and accordingly useful occasionally, but if followed, produces a diarrhea which is stopped with difficulty.

## MUTTON—A SUBSTITUTE FOR BEEF.

It is remarkable, that while in England, mutton is the dish on all fashionable tables, in our country, there is a general abhorrence of everything *sheepish*. American gentlemen, however, having once tasted the article as it is served up in London, rarely fail to order a saddle of it by the next steamer, after leaving for home themselves. I have seen recent mention of a quarter of an English Leicester, weighing sixty-five pounds for sale in the Philadelphia market. We have yet to learn that mutton like poultry, should be eaten (so says John Bull) before it is dead cold, and while it has the tenderness of life, or it should be kept "until the fibre begins to give way in the incipient stage of decay." "In summer," John continues, "mutton should be kept in ice a week, and in winter 'should not be cooked under two or three weeks."

No evidence is now required to satisfy the most sceptical, that our country is capable of producing animals equal in size to anything in the old world. And in this connexion, it may be stated that Mr. P. A. Brown, of Philadelphia, by a most ingenious instrument of his own contrivance, has demonstrated that as fine wool has been grown in five different states of our country, as the finest ever brought from Saxony by Mr. Fleichman, except a single one, and he has one American specimen finer even than that. It may also be stated, on the same authority, (Mr. Brown's) for the encouragement of those who wish to be successful in sheep husbandry, that "*fine wool and fine mutton go together.*" "Sheep," he continues, "which produce fine wool, are finer and better in the meat, than those of coarse fleeces." I do not, however, conceive this circumstance to be material to the Essex county wool-grower. The largest sheep, and those calculated for the meat market, should be sought chiefly. At the same time, it is an undisputed fact that coarse, long wool for carpeting, is in greater demand at the mills than fine wool, and more of it is imported than of

fine, and this accordingly affords an additional reason for preferring the Leicester breed.

### OLD AND SICKLY SHEEP NEED CARE.

When sheep which are peculiarly valuable and expensive, grow sick, they must have an apartment by themselves; so also should those that are very old, when they are too valuable to lose. They want better feed, warmer shelter, and close attention. There should be such a hospital in every establishment of fifty sheep, or even thirty. The well and strong sheep will overcome and kill them, if left together.

Large flocks should be divided in the sheds. The fewer that huddle together, the better, even on account of the atmosphere of the sheds or pens. But the strong ones will rob the weak; and at yeaning time, the most serious consequences would follow the promiscuous herding of a large flock.

### NUMBER OF SHEEP IN ESSEX COUNTY, COMPARED WITH THOSE IN THE STATE AND ELSEWHERE.

The whole number of sheep in Massachusetts, as returned by the marshals, in 1845, (see statistics, p. 377) is 354,943. If the 5,267,000 acres in Massachusetts be supposed to be fed by sheep, there would be 15 acres for each sheep.—In Maryland, there are 27 acres to every sheep, and in Vermont, but 3. But in Essex county, there are 256,000 acres. This will give 52 acres to each sheep in the county.

And yet, of the 514 sets of woolen machinery in Massachusetts in 1845, 103 of them are in this county. Here, then, with facilities for manufacturing, out of all proportion to other parts of the State, we grow less of the material to be manufactured, than the average of the State! And in another point of view, it should seem that the shrewd farmers of old Essex have adopted a policy which requires *more severe manual labor*, than would be necessary, were more of our land pastured with sheep. It is this—that Essex cultivates and produces as much Indian corn as Berkshire, although there are 353,000 acres more in the latter county, than in ours; showing, that although a hoed crop is the most expensive that can be raised, yet for some reason, (I think a mistaken one,) it is preferred to the easy mode of husbandry in old Berkshire.

LAND IMPROVES BY BEING STOCKED WITH SHEEP.

Even the *winter* manure of sheep, is richer than that of any animal, hogs and poultry excepted; and in summer it becomes much more so, in effect, by reason of the manner in which it is deposited. The excrements of the cow and horse, lose most of their fertilizing properties in the pasture, by their exposure to the sun and wind. The manure of sheep is deposited in rounded pellets, which are concealed from the sun by the grass and weeds, and it easily combines with the soil, while that of the cow is about useless, unless spread by hand, a thing rarely done in pastures. The instincts of the sheep, also lead it to seek the highest elevations, in warm weather, for night quarters,—the consequence of which is, that the dry and barren spots become highly fertilized.

But it is the lighter kinds of soil that receive most advantage from the manure of sheep. I insert a few extracts from a report by a committee of the House of Lords, on the subject of the wool trade, in 1828, for which I am indebted to Randall's excellent treatise on sheep husbandry in the South. In answer to the committee's inquiries, the following information was obtained:

"Mr. John Ellman, Jr., Sussex. I do not consider it possible for the light lands upon the Downs to be kept in cultivation, without flocks. I could not keep the farm I now hold, without sheep. On the South Downs the wool must be grown, let the price be what it will."

"Mr. Francis Hale, Altringham, Suffolk. The description of land I occupy, could not be kept in cultivation, without sheep."

"Mr. Henry King, Chilmark, Wiltshire. The size of my farm is 4,000 acres. I clip annually, about 6,500 South Down sheep. Such lands as I occupy, cannot be kept in cultivation without the aid of sheep."

"Lord Napier. If we had not sheep upon our lands, (the highlands of Scotland,) they would become the habitation of foxes and snipes and return to waste."

"C. C. Weston, Esq. It is utterly impossible that the Down districts can be cultivated to advantage without sheep. We

never fold our Merino or other sheep; the land is too wet." p. 71.

These facts show that sheep do enrich the land, whether it be the "dank or the dry."

LOSS OF SHEEP BY SICKNESS AND OTHER CAUSES IS TRIFLING.

It is believed that two per cent. will cover all losses by sickness. And we have a great advantage over the south and west in regard to dogs. Sportsmen hold them so indispensable there, that legislators are indulgent, and pass few laws against them. In short, however, whether the sheep dies or is killed, it has been well remarked, it never dies *insolvent*. The wool will cover all the animal costs for rearing and feeding.

WASHING SHEEP.

This operation is usually performed about a week before shearing. It is a severe one to the animal, and attended with much labor and some danger to the operator. Sheep often take a chill which they do not survive. If followed by cold wet weather, the consequences cannot but be bad. Cannot the washing be dispensed with? I believe it can. The experiment has been made, to wash the wool after shearing, and spare the sheep. The fleece need not be greatly broken; and humanity certainly requires that a perfect substitute for so unnatural an operation would be found in the way just intimated.

DISEASES OF SHEEP.

An Essay upon sheep would be imperfect, without something upon their disorders. The flocks in Europe are often devastated by fevers, both malignant, inflammatory, and typhus; but they are scarcely known in the United States.

The same remark applies, says Randall, to inflammation of the brain, (phrenitis,) of the stomach, (gastritis,) of the bowels, (enteretis,) bladder, (cystitis,) &c.

Opthalmia (inflammation of the eye,) is not uncommon in the United States. Mr. Grove recommended blowing pulverized red chalk into the inflamed eye, and some throw in tobacco juice! Mr. Randall was of opinion that pain was diminished by bathing with tepid water; and also a weak solution of the sulphate of zinc combined with tincture of opium.

Pneumonia, or inflammation of the lungs, does sometimes occur. The sheep grows dull, loses its appetite and cud, or at least ceases to chew it; the pulse is at first hard and rapid. This disease occurs after exposure to sudden cold. Mr. Spooner recommends early and copious bleeding, repeated every few hours, if necessary; and a purge of two ounces Epsom salts which may be repeated in smaller doses, if the bowels are not sufficiently relaxed. But great caution is to be observed, lest the auimal become too much exhausted.

As many of the internal organs of the sheep resemble the corresponding organs in the human species, so many of the diseases are almost identical. Accordingly Bronchitis and Catarrh, assail the sheep as well as man. And as with man so and much more so among sheep, is *prevention better than cure.* Too much cannot be said in favor of good, comfortable and well ventilated shelter, as a preventive of nine tenths of all the maladies of the sheep.

Like neat cattle, sheep will sometimes have the hove (so called,) when put into clover pastures. The stomach becomes distended with wind, and without relief the animal will die. The usual remedy is to make an incision with a sharp pointed knife between the hip and the short ribs, and put in a short tube through which the gas passes off. The wound heals easily.

Diarrhea is often troublesome, both to sheep and lambs. If it does not yield to suitable food, such as oats, crusts of wheat bread, rice boiled in milk; a dose of castor oil or powdered rhubarb, may be given,—after which, as in the human species, the diet should be light, and sometimes a tonic of brandy, in case of great prostration, is to be recommended.

Some of the old writers upon sheep-husbandry insist, that sheep are subject to *small-pox.* Thus Nicholson, author of the Farmer's Assistant, enumerates this as a disease of sheep, "being," says he, "blisters which first appear on the flanks, and spread over the whole body. It is produced by drinking stagnant water. When the blisters break, anoint them with sweet oil." It cannot be supposed, of course, however, that the disease known by that name, among men, is the same as that described by him as originating in "stagnant-water."

De Castro says the Spanish sheep are subject to *jaundice*—the flesh and bones turning yellow. He recommends a small quantity of the flax-leaved daphne guidium. In Great Britain, sheep are subject to a disease called the rot—it is a disease of the liver, and is not known among us; and another disease, called *red water*, is common in England, also unknown among us, or of rare occurrence.

I do not claim to have enumerated all the disorders to which sheep are subject; but it is believed there is little to fear on account of disease in any of its forms, as a general thing.

Neither do I claim to have set forth all the reasons which can be given, why sheep husbandry should have a greater share of the farmer's favor. I should deprecate a sheep fever like that in the time of the last war with England, when fortunes were ruined in a day. But we may be, and probably are, upon the other extreme. One sheep upon every 52 acres only! at the same time that more than 100 sets of woolen machinery are within three hours' ride for every man in the county! 15,000 pounds of wool only, grown in Essex, while 2,292,500 pounds are manufactured! 4,467 sheep only, in a county where there are 2,650,000 yards of flannel and blanketing manufactured, together with 700,000 yards of woolen cloth, not specified, and 100,000 pounds of woolen yarn spun none of which is made into cloth!*

But there is much reason to believe that the day is not distant, when public attention shall be turned to this subject; and that, avoiding the sheep fever of 1812, and the poultry fever of a later day, we shall see the sober thought of our county adding a few thousand a year, till there shall be some 20,000 to 30,000 sheep within our borders, a thing which can be done without any change that would be thought, for a moment, violent.

---

*See Hayward's Gazetteer of Massachusetts, for 1845.

# ADDENDA AND ERRATA.

To the report on Fruits, add:

*Seaver's Sweet,* (*Can Apple of Coxe.*) This early winter fruit, we have cultivated for many years with success; the tree is a very vigorous grower, the fruit more tender as an eating apple than the Danvers Sweet,—is larger, also; as it ripens it becomes of a fine yellow color, and is a saleable fruit in the market.

Page 114 read *Eolian* for *Oolian.*
" 114 " *them* for *it.*
" 125 " 1826—'28—and '29 for 1826 '27 and '28.
" 139 " *wind* for *winds.*
" 142 " *Pottsii* for *Potisii.*

ERRORS IN NAMES OF MEMBERS.

Read in 1851 Harrison G. Spofford, Georgetown, instead of Thomas G. Spofford.

Read in 1847 Eldred S. Parker, Groveland, instead of Eldred S. Barker.

NAMES OF MEMBERS HERETOFORE OMMITTED.

| | |
|---|---|
| Moses Pettengill, | Newburyport. |
| James Day, | Haverhill. |
| Edmund B. Little, | " |
| Joseph Coffin, | " |

**Dr.** **William Sutton, in account with the Essex Agricultural Society.** **Cr.**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1851. | | | | 1851. | | | |
| Sept. | 28. | To balance of former account | $221 20 | Sept. | 28. | By Premiums and Gratuities awarded by the Society and Trustees | 552 50 |
| Oct. | 8. | To bank Dividends | 239 09 | 1852. | | | |
| Oct. | 11. | To State Bounty | 600 00 | Sept. | 22. | By amount invested in Essex Rail Road Bonds | 700 00 |
| Nov. | 18. | To nett proceeds from Franklin Hall Exhibition | 145 84 | | | By interest paid on " " " | 8 17 |
| 1852. | | | | | | Expense account, as follows: | |
| April | 22. | To Bank Dividends | 216 82 | | | By Exhibition 1851. $365 95 | |
| Sept. | 22. | To amount received of new members | 111 00 | | | By Secretary's salary 75 00 | |
| " | 22. | To amount of principal and interest received on Nutting's note | 701 16 | | | By Printing 275 67 | |
| " | 28. | To interest received on loan | 19 14 | | | By Postages 22 58 | |
| " | 28. | To premiums unclaimed | 42 75 | | | | 739 15 |
| | | | | | | By balance of cash on hand | 297 18 |
| | | | $2,297 00 | | | | $2,297 00 |

## FUNDS BELONGING TO THE SOCIETY.

| | | | | | |
|---|---|---|---|---|---|
| 13 | Shares in Warren Bank, cost | $1,296 60 | Notes receivable | | $818 59 |
| 12 | " " Exchange " par | 800 00 | Essex Rail Road Bonds | | 700 00 |
| 22 | " " Commercial " cost | 1,471 66 | Cash on hand, as above | | 297 18 |
| 7 | " " Mercantile " par | 700 00 | | | |
| 6 | " " Merchants " " | 300 00 | Funds in 1852 | | 8,654 68 |
| 5 | " " Village " " | 500 00 | Funds in 1851 | | 8,417 83 |
| 3 | " " Salem " " | 300 00 | | | |
| 15 | " " Danvers " " | 1,471 25 | Gain | | 236 85 |

SALEM, 29th September, 1852. E. E. WILLIAM SUTTON, *Treasurer.*

Salem, Dec. 14, 1852. We have examined the foregoing account of the Treasurer; and find the same correctly cast and well vouched.

ASAHEL HUNTINGTON, R. S. DANIELS. } AUDITORS.

# OFFICERS OF THE SOCIETY,

## CHOSEN SEPTEMBER 29, 1852.

MOSES NEWELL, West Newbury, *President.*
BENJAMIN PORTER, Danvers, } *Vice Presidents.*
JOSIAH LITTLE, Newburyport. }
WILLIAM SUTTON, Salem, *Treasurer.*
ALLEN W. DODGE, Hamilton, *Secretary.*

## HONORARY TRUSTEES.

| | | | |
|---|---|---|---|
| Frederick Howes, | Salem. | James H. Duncan, | Haverhill. |
| Ebenezer Mosely, | Newburyport. | Gardner B. Perry. | Groveland. |
| | | John W. Proctor, | Danvers. |

## TRUSTEES.

| | | | |
|---|---|---|---|
| Lewis Allen, | Danvers. | Josiah Newhall, | Lynnfield. |
| John Alley, 2d, | Lynn. | Andrew Nichols, | Danvers. |
| Jacob Brown, | Ipswich. | William Osborn, | Lynn. |
| David S. Caldwell, | Newbury. | Thomas E. Payson, | Rowley. |
| David Choate, | Essex. | Samuel C. Pitman, | Swampscot. |
| Jeremiah Coleman, | Newburyport. | William F. Porter, | Bradford. |
| Andrew Dodge, | Wenham. | William R. Putnam, | Danvers. |
| N. W. Harmon, | Lawrence. | Dean Robinson, | West Newbury. |
| Joseph How, | Methuen. | Richard S. Rogers, | Salem. |
| John M. Ives, | Middleton. | James Stevens, | Andover. |
| Joseph Kittredge, | Andover. | John Stone, Jr., | Marblehead. |
| John Keely, | Haverhill. | Horace Ware, Jr., | Salem. |
| Royal A. Merriam, | Topsfield. | Richard P. Waters, | Beverly. |
| Wingate Merrill, | Danvers. | Enoch Wood, | Boxford. |

## MEMBERS ADMITTED IN 1852.

| | | | |
|---|---|---|---|
| George W. Adams, | Newbury. | Jewett Jones, | Methnen. |
| C. M. Andrews, | Lawrence. | Charles A. Kilham, | Wenham. |
| Otis Bailey. | Andover. | Samuel Kimball, | Boxford. |
| J. B. Barker, | Methuen. | William G. Kimball, | Bradford. |
| George W. Benson, | Lawrence. | Isaac Knowlton, | Hamilton. |
| Dwight Boyden, | Topsfield. | Edmund Little, Jr., | West Newbury. |
| George W. Butters, | Methuen. | J. Longfellow, | Newbury. |
| Daniel Carlton, | Andover. | William Merrill, | Haverhill. |
| Samuel Chase, | Beverly. | David Nevins, | Methuen. |
| John Davis, | Methuen. | Perley Ordway, | West Newbury. |
| William H. Felton, | Danvers. | William H. Osborn, | Saugus. |
| Joseph E. Fisk, | Salem. | Adino Page, | Danvers, |
| John P. Foster, | Andover. | Herman Phelps, | Andover. |
| George H. French, | " | Alonzo P. Phillips, | Danvers. |
| William H. Fry, | Methuen. | John Russ, | Methuen. |
| John C. Gage, | Andover. | David Smith, | West Newbury. |
| Joseph L. Gordon, | West Newbury. | Jesse Smith, | Haverhill. |
| Samuel Graves, | Lynn. | Frederick Symonds, | Andover. |
| John Gustin, | Danvers. | George J. Tenney, | Georgetown. |
| Joseph Hathaway, | Marblehead. | Stephen C. Thurlow, | West Newbury |
| Joseph Holt, Jr., | Andover. | Ezra B. Welch, | Haverhill. |
| Charles Ingalls, | Methuen. | Enoch Wood, | Boxford. |

# LIST OF PREMIUMS & GRATUITIES,

## AWARDED IN 1852.

### PLOUGHING—DOUBLE TEAMS.

| | |
|---|---|
| John Washburn, Swampscot, first premium, - | $8 00 |
| Moses H. Poor, West Newbury, second premium, - | 7 00 |
| Richard S. Bray, Newbury, third premium, - - | 6 00 |
| William Foster, Andover, fourth premium, - - | 5 00 |
| David Nevins, Methuen, fifth premium, - - - | 4 00 |
| Wm. F. Porter, Bradford, with Michigan plough, gratuity, | 5 00 |
| John L. Hubbard, Newbury, " " " " | 5 00 |
| George Abbot, Andover, " " " " | 5 00 |

### PLOUGHING—SINGLE TEAMS.

| | |
|---|---|
| Nathan Tapley, Danvers, first premium, - - | 7 00 |
| John P. Foster, Andover, second premium, - - | 6 00 |
| Daniel Carlton, " third premium, - - | 5 00 |
| Herman Phelps, " fourth premium, - - | 4 00 |
| J. Longfellow, Byfield, fifth premium, - - - - | 3 00 |

### PLOUGHING—HORSE TEAMS.

| | |
|---|---|
| Moses Pettingill, Topsfield, first premium, - - | 25 00 |
| John Washburn, Swampscot, second premium, - | 15 00 |

### FAT CATTLE.

| | |
|---|---|
| Joseph Hathaway, Marblehead, first premium, - | 10 00 |
| Edmund Barker, Andover, second premium, - - | 8 00 |
| Joseph Hathaway, Marblehead, third premium, - | 5 00 |

### WORKING OXEN.

| | |
|---|---|
| Frederick Symonds, Andover, gratuity, - - | 10 00 |
| J. Longfellow, Byfield, second premium, - - | 8 00 |
| Gayton P. Osgood, Andover, third premium, - | 6 00 |
| William Foster, " fourth premium, - | 4 00 |

GREATEST NUMBER OF WORKING OXEN FROM ANY TOWN.

From Andover, thirty-six pair, first premium, - $20 00

STEERS—THREE YEARS OLD.

James Day, Haverhill, first premium, - - - 7 00
David S. Caldwell, Byfield, second premium, - - 6 00

STEERS—TWO YEARS OLD.

William Tucker, Andover, first premium, - - 6 00
Jacob Farnum, " second premium, - 4 00

YEARLING STEERS.

Gayton P. Osgood, Andover, first premium, - - 4 00
Joseph Kittredge, " second premium, - 3 00

BULLS.

Eustis Kimball, Bradford, first premium, - - 7 00
Jedediah Farnham, Andover, second premium, - 6 00
William Carlton, " third premium, - - 5 00

MILCH COWS.

James Day, Andover, second premium, - - - 9 00
James Poor, " third premium, - - - 8 00
Josiah Crosby, " fourth premium, - - - 7 00

HEIFERS IN MILK.

Josiah Crosby, Andover, first premium, - - - 7 00
Joseph Kittredge, " second premium, - - 6 00

HEIFERS—TWO YEARS OLD.

Wm. H. Goodwin, Marblehead, first premium, - 5 00
James Stevens, Andover, second premium, - - 4 00
Isaac B. Cobb, Methuen, third premium, - - 3 00

YEARLING HEIFERS.

Joseph How, Methuen, first premium, - - - 4 00
J. Jones, " second premium, - - 3 00
Haverhill Poor Farm, third premium, - - - 2 00

STALLIONS.

Seth Kimball, Bradford, first premium, - - 20 00
Josiah Crosby, Andover, second premium, - - 10 00

COLTS—FOUR YEARS OLD.

Royal A. Merriam, Topsfield, first premium, - - 6 00

COLTS—THREE YEARS OLD.

Isaac Stevens, Andover, first premium, - - $5 00
Josiah Crosby, " second premium, - - 3 00

COLTS—TWO YEARS OLD.

Seth Kimball, Bradford, first premium, - - 4 00
E. C. Brooks, Lawrence, second premium, - - 2 00

YEARLING COLTS.

Nathaniel Stevens, Andover, first premium, - - 3 00
J. & J. E. Foster, Boxford, second premium, - 1 00

SWINE.

Ezra B. Welch, Haverhill, Boar, first premium, - $5 00
Charles Rowell, Salisbury, " second premium, - 3 00
Josiah Crosby, Andover, Breeding Sow, first premium, 5 00
F. Boyden, Topsfield, " " second premium, 3 00
Henry A. Gould, Andover, litter weaned pigs, first prem. 6 00
Wm. H. Balch, Topsfield, " " " second " 3 00

SHEEP.

Joseph Kittredge, Andover, first premium, - - 6 00
Jacob Farnum, " second premium, - - 5 00

JUNE BUTTER.

Jonathan Berry, Middleton, second premium, - - 8 00
Sarah J. Stevens, Andover, third premium, - - 6 00
Mrs. Fairfield White, Lawrence, gratuity, - - - 5 00

SEPTEMBER BUTTER.

Jonathan Berry, Middleton, first premium, - - 10 00
Caroline J. Ordway, West Newbury, second premium, 8 00
Nathaniel Felton, Danvers, third premium, - - 6 00

FARM MANAGEMENT.

Joseph Holt, Jr., Andover, gratuity, - - - 15 00

GRAIN CROPS.

Adino Page, Danvers, premium, - - - - 6 00
Christopher How, Methuen, premium, - - - 6 00
Wingate Merrill, Danvers, " - - - - 6 00
Isaac Smith, Beverly, gratuity, - - - - 4 00

ROOT CROPS.

| | |
|---|---|
| Andrew Nichols, Danvers, premium, | $6 00 |
| John L. Hubbard, Byfield, gratuity, | 4 00 |
| Richard P. Waters, Beverly, premium, | 6 00 |
| Charles French, Andover, " | 6 00 |

ESSAYS.

| | |
|---|---|
| David Choate, Essex, premium, | 10 00 |

| | |
|---|---|
| By the Committee on Poultry, | 19 50 |
| " " " " Vegetables, | 10 00 |
| " " " " Fruit, | 44 00 |
| " " " " Flowers, | 10 00 |
| " " " " Leather, and articles therefrom, | 24 00 |
| " " " " Cloth and Hosiery, | 9 50 |
| " " " " Counterpanes, Carpets and Rugs, | 21 00 |
| " " " " Fancy Articles, | 34 00 |
| Total, | $661 00 |

Hamilton, January 1853.

☞ The list of premiums will be found in the printed Show bills. It is nearly similar to that of last year, and will be furnished to any one, on application to the Secretary.

# LIBRARY.

The Library of the Society is kept at the City Hall, in Salem. The City Clerk, (Joseph Cloutman,) acts as the Librarian, and will deliver books under the following regulations:

1. Each member shall be entitled to take from the Library two volumes, on signing a receipt for the same, and agreeing to be accountable therefor.

2. No member shall keep any book more than two weeks, after being notified by the Librarian that the same is wanted by another member.

3. All books belonging to the Library, shall be returned on or before the 15th of November, in each year; that the same may be examined, and the condition of the Library reported to the Trustees.

4. Any member who shall neglect or refuse to conform to these regulations, shall forfeit the privilege of taking books from the Library.

---

NOTE. All who have paid the initiatory fee of three dollars, towards the funds of the Society; all who have received certificates of membership by order of the Trustees; and all ordained ministers of the Gospel, resident within the county, are considered as members. Editors of newspapers published in the county, are also, by vote of the Society, entitled to the privileges of the Library.

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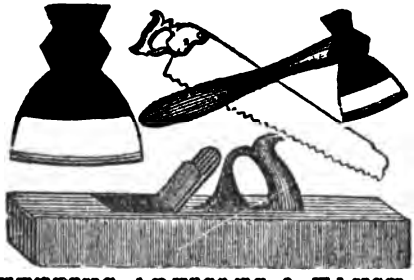
# HENRY HALE,

Importer and Dealer in

## HARDWARE GOODS AND CUTLERY,

*FOREIGN AND DOMESTIC.*

**No. 215 Essex Street,**



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**HOUSE KEEPING ARTICLES & FANCY GOODS,**

# Agricultural Tools and Ploughs,

Plough Castings, Friction Rollers and Cranks; Iron, Copper and CHAIN PUMPS, and Lead Pipe.

## CAMPHENE AND FLUID LAMPS,

Hanging, Side and Astral, a great variety of styles;

SOLAR LAMPS, beautiful patterns; GIRANDOLES, with elegant cut drops; Bronze, Ormolu and Silver Cut Glass, Britannia, Brass & Japanned Lamps.

Carpenters' Tools and House Trimmings; Shoe Makers' Tools, Nails, Thread, and Pegs; Boiler Doors and Oven Mouths; Furnaces; Cast Iron Hollow Ware; Tubs, Pails; Mats; Cut Nails; Emery; Zinc; Lead; Japan and Sponge Blacking, &c.

# PRIZE PLOUGHS,

The Subscribers, Manufacturers, Wholesale and Retail Dealers of

**PROUTY & MEARS'S**

## CELEBRATED CENTRE DRAFT PLOUGHS,

Which obtained the Prize at the World's Fair, in competition with Ploughs from all parts of the world; also

## AGRICULTURAL IMPLEMENTS,

Of all kinds; Garden, Grass, and Flower Seeds; Trees; Shrubs, &c. Also, Prouty & Mears's New and Improved HOT AIR VENTILATING

## WOOD AND COAL FURNACES,

for heating Churches, Stores, Dwellings, and Public and Private Buildings of all kinds, and which are warranted to give entire satisfaction, in all cases.

**Cooking Ranges, Cooking, Parlor, and Office Stoves,**

of the latest and most approved patterns now in use; and to their already extensive stock, they are constantly adding new and valuable improvements, being determined to offer to their numerous friends every inducement for their continued patronage; and they would cordially invite all in want of any of the above articles, to call and examine their extensive stock, at their Warehouse,

*NOS.* **19, 20** *&* **22** *NORTH MARKET STREET,*

**BOSTON.** **DAVID PROUTY & CO.**

# Adams, Richardson & Co.,

Importers, Wholesale and Retail Dealers in

## FOREIGN AND DOMESTIC HARDWARE,

## AGRICULTURAL IMPLEMENTS,

## Cut Nails, White Lead, Sheet Lead,

## LEAD PIPE, &c.

Agents for

**Fairbanks' Platform Scales.**

*NO.* **207** *ESSEX STREET,*

JOSEPH ADAMS,
C. M. RICHARDSON,
H. E. JOCELYN.

SALEM, MASS.

# TRANSACTIONS

OF

# THE ESSEX

# AGRICULTURAL SOCIETY,

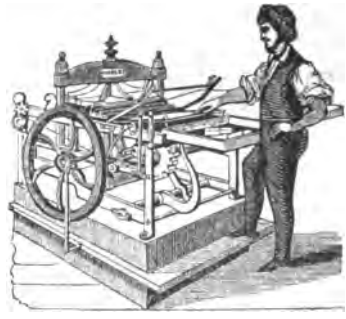
FOR

# 1853.

PUBLISHED BY ORDER OF THE SOCIETY, DECEMBER, 1853.

SALEM:
Printed at the Office of the Essex County Freeman.

# BOOK AND JOB



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**Over 213, 215 and 217 Essex Street,**

SALEM.

## Plain and Fancy Printing,

**OF EVERY KIND,**

FROM THE SMALLEST CARD OR BOOK, TO THE

**MAMMOTH POSTER.**

**Neatly and promptly executed, in any desired color of**

**Ink or Bronze.**

## THE ESSEX COUNTY FREEMAN,

A SEMI-WEEKLY NEWSPAPER,

**IS PUBLISHED AS ABOVE, AT $3.50 PER YEAR.**

Merchants and Traders will find it to their advantage to Advertise in the Freeman, new Advertisements being inserted in the BEVERLY CITIZEN free of charge.

☞ ALL ORDERS SHOULD BE ADDRESSED TO

**J. EMMET POMFRET,**

No. 1 HIGGINSON SQUARE,

**SALEM.**

4.

# TRANSACTIONS

OF

# THE ESSEX

# AGRICULTURAL SOCIETY.

## 1853.

PUBLISHED BY ORDER OF THE SOCIETY, DECEMBER, 1853.

SALEM:
PRINTED AT OFFICE OF ESSEX COUNTY FREEMAN.

M.DCCC.LIV.

The Gift of
Henry Whitfield ...
of Salem.
Received ?,
1854.

# ADDRESS

OF

# JOSEPH S. CABOT.

# ADDRESS.

In addressing you on the present occasion gentlemen, I feel desirous to confine myself in my remarks, to practical Agriculture; because it seems to me an address to an Association instituted as is the Essex County Agricultural Society, for a specific purpose, should have a direct bearing upon the object aimed at in its organization. But from this course I am in some measure deterred, by a consciousness of the want of a sufficiently familiar acquaintance with the subject; and therefore, feel compelled to occupy some portion of your time with observations of a very general and somewhat desultory nature. Still as Agriculture and Horticulture, though occupied with a different class of objects, and pursuing their ends by different processes, are so intimately blended, that they may fairly be considered as different branches of the same science; and since the former has been with me an object of interest and enquiry, and the latter both theoretically and practically, has received much of my attention, I shall endeavor to impart to some portions of my discourse, something of that practical character, that, did I feel competent, I should wish to maintain throughout the whole.

Life — organized life — seems to imply nourishment as a condition indispensable to its maintenance, as well as to its farther development; in every stage of being, the first want to be supplied is that of food. To men, while living as detached individuals, or in groups of a limited extent, widely separated, as

huntsmen or fishermen, the forests and rivers supply this essential requisite; eked out it may be occasionally, by contributions of wild fruits and wild grain. These are, however, at best but a precarious dependence, and where excess or abundance must frequently be succeeded by periods of abstinence or want, the wild animals with instinctive dread fly the presence of man, and new hunting grounds must be sought in the more remote recesses of the wilderness. But as population increases and men become gathered into communities, then the chase by degrees ceases to be a reliance, and new sources of aliment must be sought out. These sources the earth itself supplies in exhaustless abundance. Man, keenly observant of her processes, begins to imitate those of nature, in the gathering and sowing of seeds; and guided by the teaching of such observations, or the dictates of his judgment, learns to prepare the soil and to till the ground. Agriculture thus seems to be coeval with the organization of society, and is the first practised of all the arts.

An adequate supply of food being essential to existence, until that is obtained no thought can be given to anything else. But when this supply is abundant, an end only to be ensured by the cultivation of the soil, and no longer requires the labor of the whole community, attention may then be bestowed upon other objects,—at first also of necessity but subsequently of comfort and convenience. As however, no art, not even such as have reference to the physical wants, can flourish or even exist until the object of the original art is in a measure at least attained; it may be said with truth, that upon it all others depend; and that agriculture essential to human existence, is an indispensable condition of human progress and of social improvement.

So too, without agriculture commerce cannot flourish, even if it have a temporary existence. If the skins of animals, the natural products of the forests, and articles of similar origin, can supply to a limited extent the means of traffic, such cannot long maintain an extended commerce. Commerce is the interchange of the superfluous products of the labor of different communi-

ties or individuals ; and for the creation of such exchangeable values with all nations, agriculture is the main dependence. It is the Wheat and other cereals of temperate climates, the Rice and Cotton of the South, the Hemp and Flax of the North, the Coffee and Spices of Tropical regions, the Teas of China, all products of agriculture, that freight the ships on every sea, and constitute those articles of exchange that maintain the commerce of the world.

So too, it is agriculture that supplies to a great extent the raw material for manufacture ; and upon the development of the industry of the former that of the latter mainly depends. For manufacturing is but little more than changing and modifying the products of agriculture, and without it neither manufactures or commerce, that but distributes the results of both, could have an existence.

Agriculture, indispensable as the only reliable source for a supply of food, and exercising as it does so important an influence in the social economy, is if possible increased in consequence by being the only unfailing source of national wealth and greatness. A nation wholly dependent upon others for food, would be almost powerless ; even a partial reliance of this kind, operates as a continued drain upon its resources, and tends to cripple its power. Of this the nations of the present day furnish abundant evidence, without rendering it necessary to turn back to the times of an earlier civilization for proofs to establish the fact.

Foreign armies may ravage a country ; storms and tempests sweep over it ; fire waste its cities, or earthquakes overthrow them, yet a prosperous agriculture will soon efface all traces of such ravages, and as in ancient fable — the giant had his strength constantly renewed by contact with his mother-earth — so nations find in the bosom of the, when kindly treated, ever-fertile soil, means of speedy restoration from the most dire calamities.

Various causes, some having a direct relation to it, and others foreign and extraneous in their nature, influencing alike the

products of the soil, as well as the modes of its cultivation, conspire to affect and control the agriculture of every country.

Among such, climate exercises a paramount influence. Every climate seems to have a particular species of vegetation adapted to it: thus the Grains and Grasses of temperate climates are unsuited to equatorial regions; and the Spices and Fruits of the tropics to the Temperate Zone, the Rice and Cotton of the South, the Hemp and Flax of the North, cannot well be made to exchange places. Art can, it is true to some extent, overcome obstacles presented by nature. With us the Grape and Fig are produced in the highest state of perfection; and in summer, our gardens are ornamented with exotics, glowing with the rich colors of a warmer region. But this is only done to a limited extent by the creation of an artificial climate in order to gratify the taste, or minister to the wants of luxury. Plants which are indigenous to one country, may be perfectly adapted to another remote from it; but it must be under the circumstances of a similar climate and situation; thus plants and shrubs from the mountain ranges of India, the Himalayas, find a congenial home in the gardens of Europe and America, and flowers from Northern China, flourish and thrive in spite of the rigors of a New England winter; and even become not unfrequently so perfectly naturalized as not to be distinguished from the natives of the soil; of this the ox-eyed daisy, or white weed, now scattered over the meadows and fields of all the Eastern and Northern parts of the United States, and the wood-wax, confined still to the hills and pastures of Essex County, both of foreign origin, unfortunately for farmers furnish undeniable evidence.

Climate not only controls the products of the soil, but materially influences the character of its cultivation. In countries where nature produces spontaneously, or without requiring the aid of human skill and labor, most that his subsistence actually needs, man yields to the enervating influences of climate. Where the bread-fruit grows wild, man will not labor to raise corn, for human exertion grows sluggish when the spur of necessity ceases to stimulate.

And while in more rigorous climates, with a soil requiring skill and labor to compel the harvest, the art assumes a higher character, agriculture under apparently more propitious circumstances, continues to retain its simplest and rudest forms: as, however, the gifts of Providence, though varied, are not probably so unequal as they may appear, it may well be questioned, whether if in the life and energy imparted to the frame by the bracing airs of apparently less favored climes, in the vigor of body and activity of mind, leading to the development of both, even under the condition of necessity for constant labor, a compensation is not found, for the soft airs and glowing suns of the tropics, with their enervating influences upon both body and mind, inducing to sensual indulgence or dreamy indolence, although with what appears an object of exemption from the effect of the stern decree:—"In the sweat of thy face shalt thou eat bread."

Another cause that operates, to a not inconsiderable degree, upon the character of the agriculture of a country, is its territorial extent when compared with its population. When population is limited, with vast tracts of unoccupied land, the cultivation of the occupied part will be more superficial and less thorough; than in countries with a population approaching their capacity of maintenance, because such will be most profitable. Neither in such will any endeavor be made to prevent exhaustion; for while new lands can be drained for perhaps a nominal consideration, when one field becomes impoverished, another will be resorted to, and the more expensive processes of husbandry must be neglected.

But when the population is dense, and land on that account limited in quantity and valuable, then the endeavor will be to obtain the greatest amount of produce from the smallest quantity of land. And all the appliances of science and art will be appropriated to its improvement in fertility. It may perhaps be a question, but one of which the consideration is not now called for, whether what is gained in one direction by an improved

state of agriculture, consequent upon a dense population and enhanced price of land, may not be lost in another on this same account; for land, cheap land, is a great conservative element; and when a farm is within the reach and the means of every man who wishes to obtain one, the institutions of society run little risk of disturbance or overthrow. This cheap land too is a great element of national power and greatness. The growth and increase of the United States may in no small degree be attributed to the great amount of Public Lands of the most fertile character for sale in such quantities as may be desired, and at such a price that every man who is industrious and prudent can buy to a reasonable extent. Under this combined attraction of its cheapness and fertility, a great tide of population, a tide that knows no reflux, but that is constantly swelling higher and higher by the inpouring of the streams of foreign immigration, is constantly rolling forward and over the unoccupied portions of the country. At first the crests of its foaming waves are seen in the solitary clearing, with its log-cabin, and the trunks of the trees blackened by the fires, scattered at long intervals through what is yet a wilderness. Presently these clearings increase in number, the forests disappear before them, and soon smiling towns and villages attest its presence with overwhelming power; the solitude and silence of the prairie becomes broken by the presence of man, by the sounds of human labor and the lowing of herds and flocks; and the vast savannas, where but now the horizon alone bounded the view of waving wild-grass, becomes covered with the rich crops of a varied agriculture, and the abode of man and the home of civilization is found where but before the prairie wolf roamed, and the wild deer made its lair; towns and cities appear — forests and wilderness are gone.

In a country of a limited extent in comparison with its population, lands, whatever may be the tenure by which they are held, necessarily in time become much subdivided, and by this subdivision, the character of its agriculture will be sensibly affected. Small fields will be made by thorough tillage, to yield

to their utmost capacity; the spade will supersede the use of the plough in their cultivation; and instead of being sowed broadcast by the hand, the drill will be used to distribute the grain evenly over the ground. Examples of this kind of agriculture may be found in England, France and the Netherlands. But in sparsely inhabited countries of great territorial extent, lands will usually be held in large tracts, and reliance will be placed upon a crop produced upon a great breadth of superficially cultivated country, rather than upon a thorough cultivation of a limited quantity of land, while manual labor must be in a great measure dispensed with for the plough and other agricultural implements. The agriculture of Poland, Russia and some parts of our own country partakes of this character; for although in the United States a great extent of country is not often found under one owner, yet a great breadth of land is not unfrequently found under one and the same crop; the owners of contiguous lands uniting in their cultivation, and the regular routine of husbandry bringing such under the same crop. This state of things more frequently occurs at the South and West. Between Cincinnati and Lawrenceburg I have myself rode for miles over the Miami bottom, through one field of corn, and farther west, in the Wabash Valley, I have seen on the Shawnee Plains, thousands of acres waving with the deep green foliage of this plant.

The geological formation of a country and its natural features more or less influence the character of its agriculture; because to a particular formation particular plants are more or less adapted; and by its features whether mountainous or level, the kind of husbandry to which it is best suited, be in a measure determined.

The nature of the soil too must influence the amount and degree of cultivation necessary to produce the best results. In the valley of the Mississippi, with its rich alluvial prairies, where for miles on miles scarce a stone will impede the progress of the ploughshare, or its fertile forest lands, where when the trees are

once removed no impediment to cultivation exists, the soil in both cases, from its nature being fine and thoroughly disintegrated a very much less amount of cultivation is necessary than that required, for the hard, stiff, stony soil of New England, where the process of ploughing and harrowing must be repeated, in order to pulverize it and render it sufficiently fine for the purposes of vegetation.

Agriculture like every other science is one of progress; and that too in accordance with the greater or less advancement of society. At first rude, and marked by feeble or ill directed efforts, it obtains at length under the teachings of research, aided by discoveries in other sciences a somewhat perfect development. This progress in the science must necessarily be accompanied, by the mental progress and intellectual advancement of those devoted to it. In the infancy of the art the farmer is almost necessarily but a mere laborer, hardly more than a mere mechanical power. He needs strong sinews and powerful limbs, while scarcely an occasion arises to call into exercise his intellectual faculties. This will answer but for a time; circumstances change; improvements are introduced, and discoveries in the science are made, requiring a corresponding advancement in the husbandman himself, until at length agriculture, taking its proper position among the sciences, those engaged in its pursuits, must in order to succeed, become educated and cultivated men.

Organized bodies may be defined as "having several constituent parts which united, form a whole, capable of increase and nourishment." All plants come within this condition — and thus vegetable existence is an organized existence; and a constant supply of nourishment is essential to its continuance and increase. This afforded in very small quantities may allow of a protracted life, with a feeble and sickly growth. But without an ample supply of proper food, in a fit state to be absorbed by the plant, a healthy and vigorous vegetation cannot long be maintained. Plants obtain their nourishment from the soil and from the atmosphere: while that derived from the latter is beyond the

reach of the farmer, the former is to some extent within his control; and when deficient may be supplied in the quantity required.

The fertility of a soil depends upon its containing among its various constituents, all those that are suited to the nourishment, and necessary to the growth of plants. When such exist in adequate supply, no foreign additions to the soil are required; and in some instances this is found to be the case to such an extent as to permit the cultivation of the same crop upon the same land for a long series of years, without any perceptible diminution of the quantity of the product. Such is the case to a certain extent in our western country, where it has been said that in the neighborhood of Vincennes, a settlement on the Wabash, of the same date as Philadelphia, the same land has been under corn for more than sixty years in succession. Such a state of things too may occur, where the natural fertility of the soil, is maintained by the operation of some extraneous cause, such as the periodical overflow of rivers, of which that of the Nile is a familiar example. Experience, however, teaches us that, in time, the most fertile soil, unless the elements of its fertility are constantly renewed by the operation of natural or artificial causes, must grow gradually less and less productive, and in the end become wholly exhausted. The diminished crops on the originally fertile and productive lands of Western New York, are an evidence of this deterioration, and the abandoned old fields of Virginia of this entire exhaustion.

As the great object of agriculture is to increase the quantity and improve the quality of the vegetable food of men and animals, the great object of the farmer is to maintain and increase the fertility of his fields, by restoring or enlarging the supply of nourishment for plants, because in no other way can the object of his art be attained.

This restoration of fertility, this adequate supply of nourishment, is sought for and procured in various ways, by the operation of some mechanical process, as ditching, draining, deeper ploughing, by a cultivation conducted on scientific principles, in

the adoption of a regular routine of crops, or by the application to the soil of substances containing those elements of which by previous crops it has been deprived. The expense attending it, has perhaps led farmers not sufficiently to consider, the beneficial effects to be derived from the practice, of some of the mechanical processes of agriculture. In many cases, the cost of irrigating, and underground draining, in comparison with the value of land, forbids all attempts at such methods of improvement, but in others, as in most parts of this county,where land has become valuable, it is believed that some of them may be resorted to with advantage. I allude to this subject, rather for the purpose of stating a fact, than from an intention of entering upon its discussion; a fact, as it seems to me, that may be of interest to some, because there exist in the county of Essex, large tracts of land of the same character as that to which this fact has reference. It has been found by actual experiment in the County of Norfolk, that the salt marshes are greatly improved in value, by simply ditching them, so as to drain off the surface fresh water that collects in pools and allow the tide to flow freely through the ditches; that by this method the crops of hay have been greatly increased, so as to produce more than two tons to the acre, and the lands when thus treated can readily be let for from $7 to $8 per acre per annum.

The mode however more usually adopted, for renewing or increasing the fertility of the soil, is by the application to it of various substances, distinguished by the general name of manure, that in their constituent parts, contain the elements of the growth and nourishment of plants. The substances used for this purpose, it is unnecessary here to recapitulate. Such should if possible be produced upon every farm in sufficient quantity for its use. In some instances however this cannot be done, as in the case of farms devoted to the raising of supplies for the market, where the produce raised is consumed off the farm. In such cases, a supply of this element, indispensable to success in agriculture, must be sought elsewhere. And as it can only be obtained at

great cost, it is to the farmer a matter of the last moment, to procure a supply at the cheapest rate, the greatest amount of efficient vegetable nutriment at the least expense. With this object various foreign substances have more recently been resorted to, among the more prominent of which, may be mentioned crushed bones and Peruvian guano. Both these articles have for some time been extensively used in England as fertilizers, and more recently in some parts of this country, as in Virginia, Maryland, and North Carolina where guano has been largely applied and with great efficacy. In New England the use of these and like substances for manure, has been more limited, but of both guano and crushed bones in a crude state, or dissolved in sulphuric acid, is beginning to excite attention. It has been supposed that our climate was too dry to render the application of guano successful, but this objection if well founded, may generally be obviated by seizing a proper time to apply it to the land early in spring, when rains usually are of frequent occurrence, or at other times when there are indications of showers.. I have myself used guano as a top-dressing to grass lands, and both guano and dissolved bones for other purposes, with, as I thonght, decided success, and so far as a limited experience justifies the formation or expression of an opinion, am inclined to think that both, the latter as manufactured under the name of the improved superphosphate of lime, as fertilizers are worthy the attention of Farmers. Although the cost of such a quantity as is usually considered sufficient for an acre, say 400 to 500 lbs, amounting from $10 to $12 50 is an item to be considered, yet if more than repaid by the produce of the first crop, it will be a not injudicious expenditure, and taking into view the fact that, it can be applied to the land without the expense of carting or handling, attending the application of the substances commonly used for the purpose, it is believed that guano will prove cheaper than any other manure the farmer may be required to purchase.

Another objection that has been made to the use of guano as a

manure is, that though powerful and active, its effects are of short duration. This may be so, but if true is by no means conclusive against its use, because taking into view the interest on the cost of manure, and on the cost of the land too, that which is powerful and quick in its operation, though such should be of short duration, is much cheaper at the same price than a manure, that though exercising a more lasting influence, is weak and sluggish in its effects.

Whatever means may be adopted for the purpose, one rule with respect to cultivation, may be safely laid down as an established axiom, and that is, that no land will produce a remunarative crop, unless it contains, or is made to contain, an adequate supply of vegetable nutriment, the labor of cultivation remaining under all circumstances very nearly the same. One of the best and most successful farmers in an adjoining county, remarked to me not long since, that he had always found that the more money he spent on his farm, the more money he made, and this when confined to the improvement of land, as was intended in this instance, will probably always hold true. Land devoid of nutriment for vegetation, will not yield a harvest. "Ye cannot gather grapes from thorns or figs from thistles."

Air, water, light and heat are as indispensable to plants as to animals, both as sources of food, and as exercising an influence upon their growth and organization. The soil then should be kept light and loose, for the admission of the two former to the roots, and with respect to the latter, such measures as is possible be taken to insure an adequate supply of these essential elements. The vigorous growth of the plants cultivated too, will be farther promoted by keeping the land free from all other vegetation, for such is not only unsightly, but tends to exhaust the ground of the necessary nourishment, thereby enhancing the cost of its product. A crop of worthless weeds, is too expensive to be permitted to cumber and disfigure the fields of the farmer.

The great importance in the animal economy in many species of plants, as food for man and animals, as well as the great beauty of others, has long since made the organization of this class of beings, the laws that govern their growth, the mode by which they receive and assimilate their nourishment, an attractive object of profound investigation, and the various discoveries made, and conclusions aimed at with respect to these subjects, have been embodied as a science under the name of vegetable physiology. From the very nature of this science, occupied with the secret and hidden processes of nature, and these processes operated upon and controlled by that of all other most mysterious of principles, the principle of vitality, its deductions must be to a certain extent vague and uncertain. In order to arrive at more satisfactory results, within a short period the principles of another science, itself of comparatively recent origin, chemistry, have been applied to the investigation of the various phenomena of vegetable life, thus giving rise to a new branch of vegetable physiology, now known as agricultural chemistry.

Agricultural chemistry occupies itself with the investigation of the constituent elements, of organized bodies of plants and animals employed in husbandry, and as in the organization of each, chemical action is constantly going on, action by which the nourishment received, is converted into the substance or body of the plant or animal itself, it seeks to ascertain the condition under which this action occurs — the mode of its operation, the circumstances attending it, and the best means of promoting it.

Soils are known to consist of certain mineral and other elementary substances, and the ash of plants to contain all those inorganic elements, that are found in fertile soils — to ascertain these various constituents — the quantities and proportions of each, in both soils and plants, is an object of analytical chemistry. So too, a soil may be so constituted, that in consequence of being deficient in some one element, it is unproductive, and the expense and labor bestowed on its cultivation, is in a great measure thrown away ; here chemical analysis detects the deficiency, and

points out the means to remedy the defect. Chemistry can authoritatively decide upon the relative value of different articles, as agents of fertility — what soils will be most benefited by particular manures — as well as upon the course of treatment that will probably tend to their most profitable cultivation.

Chemistry then not only investigates the phenomena of vegetable life, but points out the means to nourish and sustain it, and analyzing soils into their component parts, detects any element of fertility that may be wanting, and teaches how such may be supplied.

From this it would seem that chemistry, directing its investigations into the constituent elements of both soil and plants, detecting the absence of any particular element that may be wanting in the soil, and at the same time making known those substances that most tend to produce a healthy and vigorous vegetation, should furnish a perfectly reliable guide, to the best and most profitable cultivation of the soil. And that this result will be in a measure at least attained, if not at present, certainly under a more advanced state of the science, may confidently be expected, and if such has not been produced, there are causes to which present failure may be attributed, without imputing such as a reproach to the science. A correct chemical analysis of the soil is a delicate operation, calling for great care as well as scientific attainment, and is one whose accuracy should be tested by repeated experiments, and it should also be certain, that a correct average of the soil of the whole farm or field, has been submitted to the test. Now it may be that in some cases, failures have arisen from an incorrect or imperfect analysis, others from an insufficient quantity on that which was not a correct average of the soil intended to be improved, having been submitted to the operation, while perhaps in all cases the very recent origin of the science, is of itself sufficient to account for any want of success, that has as yet attended its application to the purposes of agriculture. It may be too, that where no error in the analysis has been committed, that the proper mode of applying the substances intended to

supply some defect in the soil has not been used, that some divisor, some composting of such, necessary to constitute a suitable nourishment for plants, has been neglected.

The chemist in his labaratory acts with powers with which he is familiar, that may be defined by weight or measures, and he can foretell with certainty, the effects of the addition or subtraction of any ingredient in any specified compound, but in the application of the principles of his science to the purposes of agriculture, the powers with which he acts, may be influenced or controlled; by the vital forces of the objects upon which he operates, and the most under such circumstances to be expected, the most perhaps to be hoped, is not to find out the secret processes of nature, and obtain control over her whole domain, but with patience and perseverance, by slow degrees some insight into her mysteries—. Acting upon living organisms,—& thus as it were face to face with creative energy. "Science must pale its ineffectual fires"—

If those who indulge in brilliant anticipations, as to the benefits to be derived from Science, in agricultural practice, are unreasonable in their expectations, they surely are not less so, who would wholly reject its aids; and whether the teachings and deductions of Scientific Theory are, or are not, in all cases confirmed by practical experience, no one who aims at being an accomplished Farmer, can with safety remain ignorant of the principles as established, of Vegetable Physiology, or disregard in practice the teaching of Agricultural Chemistry.

As I have already said, the agriculture of a wide extent of country, will be controlled by the operation of various causes, general in their character, and so that of a limited extent will be affected by those of a local nature, and restricted in their operations. The only crops that can be relied upon with safety by the Farmer, to produce a remunerative price, or of which a sale can always be confidently expected, are the great staple products of agriculture, and such must to a great extent occupy his attention. The great improvements in the modes of intercommunication, not only between different parts of our own country, but also between

it and other parts of the Globe, already introduced, has somewhat enlarged the range of these Staples, and permits a more general cultivation of some articles, for which the market heretofore has been limited and restricted. Thus by means of Steam Ships, apples are now to some extent a profitable article of export, and there seems no reason why as the facilities of intercommunication increase and extend, that a market may not be found for both apples and pears, as an agricultural staple, in those parts of the world where such cannot be raised in perfection.

Upon the cultivation of these Fruits, both on account of its intrinsic importance, as well as that it is at this time a matter of very general interest, I propose now to make some observations: The Apple, I am inclined to think, is the Fruit best adapted to general cultivation in New England, and the one whose cultivation will be found most profitable. The tree is a hardy tree, now thoroughly and entirely acclimated, is not subject to disease; it will grow and flourish in almost every soil, unless a dry sand, or wet swamp. It bears abundant Crops, its Fruit is of universal use and commands a ready sale, and will be found it is thought, in the long run more profitable for cultivation, than more delicate Fruits requiring more care, though such when in perfection, find a sale at a high price. Apples too, especially sweet apples, may be used as food for animals,—Cows and Swine, and any surplus in the Crop, or such as are unsuited to market, may in this way be disposed of with advantage. There exists among farmers such universal experience in the cultivation of the Apple, that to say much upon the subject, seems an unnecessary tax upon your time, unless it may be that cultivation of some kind, is essential to a healthy, vigorous growth of the tree, and to a crop and perfect Fruit. If an orchard is worth setting out, it is worth cultivating, the ground beneath and around the trees at least should be kept broken up, mellow, free from weeds and properly supplied with nourishment, otherwise the trees become dwarfed and stunted, and the Fruit, if ever produced, small, knurly and inferior, and yet it is no unusual thing to see apple trees set out in grass

Land, where the young Trees cannot thrive. If the ground of the Orchard cannot be wholly spared from other purposes, it should be devoted to the raising of root or other Crops, that call for cultivation, and the application occasionally to the Soil of manures—and should not be laid down to grass, until the Trees have attained age and size —, even then this will be attended with diminution of vigor to the Tree, and of perfection to the Fruit. When the raising of apples, for the market is pursued as part of the business of the Farm, probably the best course to adopt, is, to devote a portion of it to this purpose and to keep such in high condition, by constant cultivation, indeed under no other circumstances, can some varieties of this Fruit, as the Williams Favorite for instance, be produced in perfection. The object of the Cultivator, should be to produce the greatest crop of Fruit, in its highest state of perfection, and in no other way can this be reasonably expected, but by keeping of the Soil in proper condition & suitably supplied with nourishment.

The varieties of the apples are so numerous —, there being in almost every district, some one of local origin, the knowledge of which may be confined to such district, that every one in making a selection of varieties, must to some extent depend upon his own taste and discrimination — Still there are many varieties of established reputation, that may be recommended for general cultivation. Among such, of the earlier varieties, may be named the Early Harvest and the Putnam Harvest, of I suppose local name and origin, a great bearer in alternate years, less acid than the Early Harvest, and therefore better suited to the dessert — the early sweet Bough the Red Astracan, and Williams Favorite, of the autumn varieties, the Fall Harvest, the Porter and the Gravenstein, and for winter, the Hubbardston Nonsuch, the Hurlburt, the Westfield Seek no Farther, the Minister, Rhode Island Greening, Baldwin, Hunt's Russet and others, while for Sweet apples there is the Seavers Sweet, the Danvers Winter Sweet, and for late keeping, the Ladies Sweeting., and an apple from Portsmouth., a Seedling known there as the Ledge apple.

The Baldwin is so universal, and has been so long an established favorite in this County, that its cultivation has to a considerable extent superseded, that of other winter varieties—bearing only in alternate years, and then usually most abundantly, it is becoming at such times from its abundance a drug in the market; on this account Farmers will probably find it for their advantage, if in place of, or addition to Baldwins they would cultivate some other varieties, for this purpose the Hubbardston Nonsuch, Hurlburt, Minister, and Hunt's Russet, may be perhaps selected with advantage.

The cultivation of the Pear, for some time past has occupied much attention, especially with amateurs, even to the exclusion of that of every other species of fruit—for the dessert it is the most valuable one we possess, the range of its season extending through nearly the whole year. Its varieties are very numerous, some collections in this County containing many hundreds of different names. The Pear Tree though hardy, is less so than the Apple., and in selecting a site for a Pear orchard, care should be taken to choose one somewhat sheltered, a slight declivity sloping to the South or West, or level, defended on the North and East, affords perhaps a preferable situation. The high winds that prevail in our climate, and the intense heat of the sun, should both be guarded against., and from the evil effect of both, sufficient protection may perhaps be found in close planting, not sufficiently close, however, to impede a free circulation of the air, for this is essential to the production of fine Fruit, a manifest difference being apparent, between that grown under this condition, and that, when from some cause, this free circulation is much obstructed. If sometimes injurious to the Tree, the great heat of our climate, particularly in August and September, when the heat of the day is succeeded by cool nights, is favorable to the Fruit, in maturing its juices, and bringing its flavor to the greatest perfection. The roots of the Pear Tree especially while young, require protection in winter, and this may be afforded by a covering of litter, thatch, straw, spent tan, or

similar substances. It is not so much the severity of the cold that is to be guarded against, as the heaving the ground caused by its repeated freezings and thawings and to the effect of winter, may the loss of young Pear Trees, that so frequently occurs, be usually ascribed, rather than to those causes to which this destruction is commonly imputed. Whatever covering may have been used to protect the roots in winter, should be left round the trees in Summer, to operate as a mulching that keeping the ground moist and cool, tends to promote their health and vigor.

Proper attention should be given to the preparation of the ground, before planting, by draining where necessary, to get rid of stagnant or under ground water—by deep ploughing, or better by trenching, that the roots may readily extend to a sufficient depth, that the air and heat may penetrate it, and the rain pass through it, and it should be made sufficiently rich by manure, if not already so, for a crop of corn. In planting, the holes should be made larger in diameter than the extent of the roots, and the trees should not be set too deep. It is an operation that with care, may be performed successfully in either Autumn or Spring, the former especially for large trees, seems to me the preferable season, the ground being then usually in a better condition.

The Pear tree seems to thrive best, in a deep, rich, moderately moist, not wet, clayey loam, though so far as the fruit only is concerned, all varieties do not seem equally suited to the same soil, some apparently arriving at greater perfection, in a stiff, others in a light soil. For orchard or open culture, pears should be grown on their own roots, in gardens, they are frequently cultivated on the quince; for this however some varieties will not answer, seeming never to thrive, or to become perfectly united with the Stock; while there are others, that appear to assimilate to, and become completely incorporated with the quince. There is evidently a great difference in the growth of different varieties of the Pear Trees, some being of strong, rapid, vigorous growth, others of weak, slow and feeble habit, in grafting or budding the different varieties, attention should be paid to these

differences, so as not to work a strong growing variety, upon a feeble stock.

The Pear Tree is impatient of the knife, and the removal of large limbs, when rendered necessary is not unfrequently attended with injurious consequences—no other pruning is called for, than that required for the removal of cross limbs, and the proper shaping of the tree.

The proper cultivation of the pear, has been perhaps sufficiently indicated, by what has already been said. The ground round the trees at least, should be kept loose, mellow and free of weeds, and covered with a suitable mulching of litter, spent tan, or like substance, and made sufficiently rich to sustain a healthy, vigorous growth., for which purpose the application to the soil of peat, or meadow muck mixed with wood ashes, and an addition of ground bones is considered suitable. Guano mixed with the bone black of the sugar refineries, in the proportion of one-fourth of Guano, to three-fourths of bone black, and Mape's improved superphosphate of lime., as manufactured for sale, will as I believe, be found a proper and efficacious manure for Orchards.

Rain water in copious supply, seems to have a highly stimulating effect upon the fruit, as well as the tree, and where fruit of extra size is desired, in addition to a due supply of manure, and thinning of the Fruit, copious waterings with rain water, will probaby materially tend to this result.

The number of varieties of the pear, are so great, very many of which have not yet been thoroughly tested, that it is not easy to decide which are the best; and much less so, to point out those most suited to orchard culture, and to that only are these remarks intended to apply, as for this purpose many circumstances must be taken into consideration, such as the size and quality of the fruit, the vigor, hardihood and productiveness of the tree, and others that may affect its adaptation to general cultivation. The safest course for beginners in cultivating this fruit, is to confine their selection at first, to such varieties as have been

thoroughly tried, and are of established reputation. I do not intend now, to recommend any varieties as worthy of general cultivation, but in order not to pass the subject wholly by in silence, will name a few about which among fruit growers, no great difference of opinions exists. The Madeline is usually considered the best very early Pear, but seems in danger of being superseded by the Doyenne d'Ete, a small, but handsome fruit. Manning's Elizabeth, one of Van Mon's, unnamed pears, so called by the late Robert Manning, promises to be adapted to orchard culture, as does the Beurre d'Amanlis, a pear of large size, though not of the first quality, the Rostiezer, a small but exceedingly high-flavored variety, and that universal favorite the Bartlet, flourishing apparently every where, and under all circumstances. All these may be considered Summer Pears. Among the Autumn varieties, of such as are in general highly esteemed, that seem suited to general cultivation, may be named the Andrews of American origin, the Golden Beurre of Bilboa, the Swan Orange, the Bonne Louise d'Jersey, the Seckle, the Belle Lucrative, the Urbaniste, the Beurre Bosc, and the Fulton. Among the best Winter Pears are the Lawrence, a native fruit from Long Island, the Winter Nelis, the Beurre d'Ahrenbug, the Cross from Newburyport, the Glout Morceaux, especially suited to the Quince and Easter Beurre. The Columbia is a very large handsome pear, but is so liable to be blown off, even by a very slight breeze, before it is ripe, as to be only suited to cultivation in very sheltered places, or when trained very low, and therefore not adapted to Orchard Culture. The Vicar of Winkfield or Mons. le Cure, is a very large Pear, but though sometimes good, varies greatly in quality, and under the most favorable circumstances seems to require a peculiar process in ripening to fit it for the table ; it is however a good bearer, and valuable for cooking. Among the best Pears for cooking may be named the Uvesdales St. Germain, or Pound Pear, and the Catillae. These lists might be much extended, but I have purposely refrained from mentioning the more recently introduced Pears, because at pres-

ent, and until more thoroughly tested, such seem better suited to the purposes of the amateur than the farmer.

At present, perhaps because they are less plenty, the cultivation of winter pears, when such are raised in perfection, is the most profitable, but perhaps it is the most difficult, requiring the most care in the cultivation, — some varieties demand warm and sheltered situations, some to be assisted in ripening by some artificial process, while of none, unless it be for cooking, has their adaptation to orchard culture been perhaps fully tested.

The proper mode of ripening Winter Pears, is a matter of consequence to growers, and must remain probably for some time to come a matter of experiments. With some varieties, as the Winter Nelis and Beurre d'Aremberg, no care seems necessary; such arrive at perfect maturity under any circumstances, but there are others, as the Vicar of Winkfield, that appear to require the aid of some particular process. Those requiring such assistance may be placed in tight boxes, deposited in a cool, moist place, though of course not exposed to frost, where they may remain, until the usual period of the maturity of the variety arrives, when they should be removed to a warmer room. The ripening of some sorts of Pears may be retarded, and their season thereby prolonged, without injury to the quality of the fruit — but with others this can only be done at the cost of loss of flavor, — with them, when the process of ripening has once commenced, no attempt should be made to check it, or delay the period of maturity.

The preservation of fruits is an important matter, and one that has received much attention: fruit rooms or houses being frequently erected especially with reference to this object—such are usually constructed with hollow walls, and these filled in with charcoal dust, chaff, tan, or other supposed non-conductors of heat. In order to preserve it, fruit is sometimes put on ice, but by this method, if effectual for the purpose intended, the flavor and quality of the fruit is frequently injured. To preserve fruit in perfection, it is necessary to maintain a uniformity of temperature,

and at a point below that, at which fermentation usually occurs, say at from 38 to 45 degrees, according to the particular species or kind. Another condition essential to this purpose, is a uniform degree of moisture in the air—to have some particular varieties of Pears in perfection, it is necessary while ripening, or to promote that process, to increase, by artificial means, the moisture of the air by which they are surrounded. A uniform degree of pressure from the atmosphere, is also important, in order to prevent the shrivelling of the fruit. Although all these conditions are not attained thereby, perhaps the best practical mode, as yet ascertained, for the preservation, or prolonging the season of any variety of fruit, is by the construction of rooms for the purpose on the principles referred to.

Fruit, especially Apples and Pears, it is hardly necessary to say, cannot be gathered too carefully, neither can too much care be used in placing it in the barrels or boxes; great caution too should be used, when it becomes necessary to move the packages in which they are placed, particularly with such as may be intended for export to distant markets; as slight bruises cause injury and early decay. Fruit should be gathered during dry weather, and not immediately after a rain.

To almost all men, whatever may be their condition, whatever may be the pursuits in which they are engaged, farming seems to present powerful attractions. Why this is, can not perhaps be easily explained. It may be: that, as now conducted, it requires not only the usual mental culture, but an acquaintance with other sciences, with which its successful practice is connected, calling not only for the labor of the hands, but the exercise of the intellectual powers, in the occupation thus afforded for the mind as well as the body, that the general inclination for farming is to be attributed. But, however this may be, it seems certain that retirement to a farm is frequently looked forward to, almost with longing, as the end and object of labor and enterprise, and although the varied wants of Society, and the rewards thereby afforded, make such demands upon human labor and ingenuity, as in many

cases to forbid its gratification; yet the desire still exists, arising not so much from the expectation of profit, as from a natural love of agricultural pursuits.

To those, who, by success in other avocations, obtain the means, and are not only enabled, but who actually do carry into effect, what may have been a long cherished wish, and who are, when this is done, not unfrequently termed gentlemen farmers, or amateur farmers, agriculture is under great obligations. Such enter upon their new occupation with a zest that those who follow it as a labor cannot feel; they try experiments that others will not, and perhaps cannot afford to try,—find out, and introduce new and improved means of cultivation,—seek out new fruits and grains,—import expensive foreign animals, to improve the native stock, and in these and other modes, cause an advance in the art, that would not otherwise be so soon, at least, attained, constituting of what may have been in derision termed a fancy farm—a school for husbandry. It is such as these, who for the good they effect, that are justly entitled to a high place in public estimation, and when actuated, as is usually the case, not only by a love of the science, but by a spirit of liberality, they place the results of their labors and discoveries at the disposal of the public, are to be considered as its benefactors. None have done more, few as much, to promote agricultural science, to improve agricultural practice, as Timothy Pickering, the first President of your Society, John Lowell, and their associates, who led the way in those measures, that have so powerfully contributed to the present more advanced state of this art in New England. No one is now doing more to cause a further improvement than John P. Cushing, who makes his wealth subservient to the most useful purposes, or Marshall P. Wilder, who having done so much in horticulture, by the introduction of a great number of the newest and most valuable fruits, and of the rarest and most beautiful flowers, liberally placing his acquisitions within reach of the public, and seeking to ascertain, by scientific experiments, the proper mode of their cultivation, is now devoting himself zealously and

systematically to the further development of agricultural science, or Benjamin V. French, who gives his time and his means to his farm, where all the new discoveries, all the new improvements in the art are submitted to the test of practical experience, guided by scientific principles; and so of many others, all of whom would come under the description of those styled amateur farmers. But it behoves the practical farmer, using that term not so much to express a distinction, as to describe those who follow farming as an occupation, that gives them the means of a livelihood, while they take advantage of all really valuable discoveries and improvements, made by those who are devoted to the art from a love of its pursuits, to be cautious in following, at all times, the example of those who look less perhaps to means, than to results, and who, having made two blades of grass to grow, where but one or none grew before, careless of the cost, are satisfied with such reward.

Agriculture is a business, and success in it, as in any other business, is only to be insured by skill, the exercise of judgment and discretion, together with the practice of industry, and of an economy more strict, than is sometimes required in pursuits more frequently attended, if with less certain, more brilliant results. Not that the farmer should debar himself from every gratification, and devote himself to constant toil, for this would but defeat the higher purpose of every pursuit, physical comfort, rational enjoyment, and intellectual improvement. Neither for him does a proper regard for the useful, consist in the entire neglect of the ornamental and beautiful; he may have fruits, he may have flowers, trees for shade, and shrubs for ornament, the farm approaches may be arranged with some regard to taste and with some reference to the landscape, and in the farm buildings some architectural skill be exhibited, and this too without any great additional expense, or neglect of more important interests.

That agriculture, essential to human existence, indispensable to social improvement, and conducive to national greatness, is a most honorable pursuit, is evident from its results; if farther

proof of this was necessary, it might be found in the character of those who, at all times, even from that of the "man who dwelt in the land of Uz," to even ours, have followed it as an occupation. Of this, many examples, both in our own and other countries, might readily be presented, but to cite such I feel to be unnecessary. In bringing about that improvement in agricultural practice, that advance in agricultural science, of which we are so sanguine, the various agricultural societies have been generally instrumental. Among them the Essex County Agricultural Society holds a prominent place; and the good it has already effected, is, I am convinced, a sufficient inducement to its members to perseverance in their efforts, and in those measures by which that good has been attained, until what are now, to some extent, vague conjectures, shall become established facts, and the practice of husbandry be reduced to a system, conducted on principles as well ascertained as those of the exact sciences.

# REPORTS, &c.

# INTRODUCTORY REMARKS.

The Annual Exhibition of this Society was held at Lawrence, Wednesday, and Thursday, 28th, and 29th September last. The first day's arrangement was disturbed by a heavy rain in the morning, which, at one time, inclined many to an entire postponement of operations until the next day. But upon a full consultation of the Trustees and Committees, at a late hour, it was concluded to proceed to the duties assigned them. And the second day being fair, the business was closed up to the general satisfaction of those interested.

The show of domestic manufactures and fancy articles, was large and imposing. There were also some fine specimens of cotton fabrics from the Naumkeag factory, at Salem; but it was no little disappointment that the Lawrence Mills did not exhibit any of their goods. It is hoped, if the show should be there another year, the opportunity of placing in the hall, their goods, so highly and justly celebrated, will be generally embraced.

The vegetables, mostly from the vicinity of the Show, were equal, both in variety and quality, to any former exhibition. If the best specimens raised throughout the county, were all exhibited, it would probably equal any collection in the Commonwealth.

The fruit was better, far better, than was expected, considering the almost entire failure of fair apples in most

parts of the county. This portion of the Show has many warm and intelligent supporters.

It may be said of this, as of former exhibitions, that the best cattle are not shown, especially cows; fine oxen and steers were upon the ground and in larger numbers than usual, when no premiums are offered for town teams. Will all the farmers next year make an effort to make this part of the Show what it should be?

There was a large number of entries for the Ploughing Match, and the work as usual was admirably performed, still many of the teams were too hard urged. There is an admitted difficulty in comparing the work done by the Michigan plough, with that of the single mould plough of other varieties. Both modes of ploughing have still their advocates; the objectors to the Michigan contend, that on land ploughed by the latter, the harrow brings up the sod to the surface and impedes cultivation, while its advocates affirm that where the latest improved pattern is used, (the one with a larger or a wider top plough) this objection is entirely obviated. Further experiments are needed to settle the question of preference on all kinds of soil.

The show of young horses was large, proving that the rearing of this species of stock is gaining favor. And it may be well to bestow more thought and attention to the stock we breed from.

The meetings of the Trustees for business, during the year, have been punctually and fully attended, showing that the interests entrusted to their supervision, are by no means neglected.

The Annual Address before the Society was delivered by Joseph S. Cabot, Esq., of Salem. The Society was honored at the Show by the presence of Harvey Dodge, of Sutton, as a delegate from the State Board of Agriculture, of Mr. Flint, its Secretary, Messrs. French and Cilley, of

Exeter, N. H., and most of the editors of the agricultural papers, and other gentlemen from abroad interested in agricultural improvement.

MOSES NEWELL, *President.*
ALLEN W. DODGE, *Secretary.*

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## FRUITS.

*The Committee on Fruits would respectfully Report*

That in the exhibition of to-day, we were reminded of the great advance which has been made in this useful department, since the show in South Danvers in 1835 or '36 where one of your Committee exhibited native pears from Maine. This was about the commencement of a regular systematic arrangement of Fruits at our annual shows. The Exhibition at this time, notwithstanding the rain of Tuesday and the short crop of Apples in our County was much better than we could have anticipated. Pears, Grapes, and Peaches were as usual, good. As regards the last named fruit it is remarkable that the crop of early Peaches exceeded that of the Apple, a circumstance which will not probably occur again for years at least. There were 65 Entries of Fruit from the following places, viz: Lawrence, 13; Andover, 9; Haverhill, 9; Methuen, 14; Salem, 5; Newburyport, 3; Newbury, 3; Wenham, 2; Groveland, Georgetown, Beverly, Marblehead, Middleton, Topsfield, Boxford and Amesbury one each. Charles F. Putnam, of Salem, had 150 distinct varieties of Apples and Pears; Robert Manning, 121 of Pears; Moses Pettengil, of Topsfield, 54 of Apples, Pears and Peaches; Ephraim Emerton, of Salem, 29 of Pears; A. D. Rodgers, 25 of Grapes and Pears. There were fine Black Hamburg and White Sweet Water Grapes, open air culture, from S. H. Elliot, of Lawrence.

Of the native Grapes shown your Committee found none

superior to those of last year. Fine Angoleme Pears from David Nevins, of Methuen, and Rev. Dr. Packard, of Lawrence. Superior "Bezi de la Motte" Pears from Dr. Robinson, of West Newbury, one cluster of 19 grown upon a single stem, weighed 7 pounds. There were fine Hubbardston Nonsuch, an Apple which we cannot too highly recommend for New England culture, from Charles F. Putnam, of Salem, and S. H. Brockelbank, of Georgetown.

Your Committee were enabled with some difficulty to unite in the following as Gratuities. viz:

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|---|---|
| To Charles F. Putnam, of Salem, | $8.00 |
| " Robert Manning, " | 7.00 |
| " Moses Pettengil, of Topsfield, | 400 |
| " A. D. Rodgers, of Salem, | 300 |
| " Ephraim Emerton, " | 300 |
| " S. H. Elliot, of Lawrence, | 200 |
| " J. B. Barker, of Methuen, | 200 |
| " Joseph How, " | 200 |
| " N. Bodwell, of Boxford, G. W. Gage, Methuen, Wm. Merrill, Haverhill, Adam Nesmith, Beverly, E. J. Jackman, Methuen, and Andrew Lackey, of Marblehead. | $1 00 each |
| To David Nevins, of Methuen, Geo. Packard, Lawrence, David Alger, Methuen, Andrew Dodge, Wenham, Joseph Perkins, Newbury. Jonas Holt, Andover, John Low, Methuen, Joshua Hale, Newburyport, J. M. Richards, Lawrence, Rufus Slocumb, Haverhill, Benjamin Osgood, Lawrence, Samuel Ames, Lawrence, Mrs. Richards, Wenham, William M. Kimball, Lawrence, Doctor Robinson, West Newbury, Rev. H. F. Harrington, Lawrence, S. H. Brockelbank, Georgetown, A. E. Goodwin, Amesbury and A. J. Gould, Andover. | 50cts. each |

In the cultivation of Fruit, particularly the Pear, we apprehend that a judicious selection of soil and exposure, is

most important; many of our fine variietes when produced on a light sandy loam are poor and almost worthless, while the same sorts, when grown upon what we denominate a strong, retentive loam, are large, fully developing their fine character; we therefore believe that it is now the greatest desideratum in the culture of the Pear, to ascertain what varieties to cultivate on a given soil.

In the recommendations which have been made from time to time, of the best varieties of Pears for general culture (*irrespective of soil*,) many and great mistakes have arisen. Thus, for example, the Beurre' D'Aremberg, Wilkinson, Lewis, and some other varieties, will almost invariably disappoint those who grow them upon a light porous soil. There are however some sorts, which, like the Baldwin and Hubbardston Nonsuch Apples, accommodate themselves to various soils. Among these are the Bartlett, Beurre' Bosc and Thompson, Early Fall Fruits, and the Lawrence and Winter Nelis for Winter, these are all first rate Fruits. The Bloodgood, an early Pear, and the Belle Lucrative, a fall variety, are higher flavored and better developed upon a light, warm soil. The experimental knowledge concerning the proper soil for the finest Pears is of the utmost importance in the cultivation of this fine fruit.

For the Committee,

JOHN M. IVES.

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## INTRODUCTION OF NEW FRUITS.

*The committee on "the Introduction of new Fruits," report,*

That the only Fruits exhibited for the Premiums offered by the Society, subject to their awards, were two varieties of grapes from Mr. James Blood, of Newburyport; that were presented, as coming within the conditions entitling them to the first and second Prizes, offered for seedlings of this species of Fruit. The premium was," for a new variety of native or seedling grape, of

decidedly superior quality, ripening in this county in the open air, by the middle of September, prolific and suitable for the table." These grapes were examined on September 12th, by one of your committee, who found them then, as he states, "ripening in the open air, prolific &c." Mr. Blood represents, that these grapes were raised from seeds of a Malaga Raisin, sowed in Pots, and transplanted into the open ground—that they have been in bearing for eight years, and have never, during that period, failed to produce a crop, he farther says, that this year, they were fully ripe in the last week in August, and that consequently when exhibited, they had lost the peculiarly rich and delicate flavor, that distinguishes them from other grapes.

From this, it would seem, that the grapes of Mr. Blood, "if of decidedly superior quality" — were justly entitled to the Premium of the Society; for certainly those of the character here represented, would be considered an acquisition to our somewhat limited stock of grapes suited to out door culture—but yet your committee hesitate to make such award.

It is very difficult, and must be dangerous, to form a decided opinion respecting the quality of any Fruit from testing it once only, and then perhaps but a few specimens, because all Fruit growers know that not only many species, but many varieties of the same species, vary much in quality, in different years. This is especially true of grapes, that seem to be peculiarly subject to the contingencies of the season — and whose adaptation to general cultivation, can only be ascertained, by a somewhat extended experience. These grapes have, it is true, been proved by Mr. Blood, for several years, but your committee have seen them but once, and responsible to the Society and the public therefor, they can make their award only upon their own examination and judgment.

In the Massachusetts Horticultural Society, no new seedling Fruit can receive a premium, until it has been tested from three to five years in succession, and the reasons that led to the adoption of such rule apply forcibly to the case now under consid

eration. The Premium offered by the Society is a liberal one, and its award is a matter of moment, not to the Society, and competitor only, but the public — because such award gives the assurance and pledge of the Society, that the Fruit, to which it is made, is worthy of an extended cultivation, a warrant that should not as your committee think, be given until authorized by such repeated examinations, as will greatly tend to prevent the commission of error.

For these reasons, your committee, thinking that they have not had sufficient opportunities of testing them, to feel certain that they fully answer the conditions required by the Society, while entertaining a very favorable opinion of their merits, have refrained from awarding Premiums at this time, to Mr. Blood's grapes, and recommend to the trustees the with-holding of such, until by further trials, their claims shall be more clearly established.

JOSEPH S. CABOT, *Chairman.*

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## FLOWERS.

*The Committee on Flowers award the following Premiums and Gratuities, viz:*

To George J. Thornton, Andover, for the display of Boquets, large quantities of cut flowers, and Green House Plants, the first Premium of, $6 00

To Charles J. Storrow, By Edward Flynn, Lawrence, for very fine display of Dahlias, and variety of Boquets, second Premium, $5 00

To Henry K. Oliver, by John Hart, of Lawrence, for fine display of Dahlias, and fine lot of Balsams, third Premium, $3 00

To John C. Hoadley, by John Sullivan, of Lawrence, for fine display of Dahlias, fourth Premium, $2 00

To Julia M. Farr, Groveland, for two Crosses composed of Dahlias, Gratuityof, $1 00

To Peter Smith, Andover, For display of Coxcomb—Arbututon Cuphea Achunesnis, $1 00

To George S. Merrill, Lawrence, For Floral Pyramid, $1 00

To David Middleton, Andover, For display of Coxcmob, .50

To Miss L. M. Ives, Salem, For display of French Balsams .50

To Mrs. Rufus Slocumb, Haverhill, For fine Boquet of Asters, .50

To George Turner, Haverhill, For Boquet of Dahlias, .50

To M. J. Goodwin, Lawrence, For Geranium, .50

To Andrew Lackey, Marblehead, For fine Balsams, .50

To A. R. Brewster, Mrs. Abigail Brown, Mary Ann Perrin, Everitt Perrin, Catherine Foster, J. B. Gilbert, L. M. Dearborn, A. Crosby, John Hanagan, all of Lawrence, for their contributions the thanks of the Society.

G. W. Gage,
Wm. D. Lamb, } Committee.

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## VEGETABLES.

To this Committee were assigned those productions of the vegetable kingdom, not classed among the fruits, as the apple, pear, quince, peach, plum, grape, &c., or the lovely and beautiful flowers; these were placed under the charge of other Committees.

The collection was very good, exceeding that of any previous year. It was very promiscuous, including varieties of corn, squashes, melons, tomatoes, cabbages, celery, onions, potatoes, beets, &c., some of these are the ripened fruit, some the pericarp or receptacle of the seed, some the

leaf, some the bleached leaf stalk, some the matured bud, and others the root — nearly every part of the plant is represented, in one or the other of the above-named varieties, and is used for culinary purposes. Various modes of treatment are requisite, to bring to a high state of perfection the development of that particular part, for which the respective variety is cultivated. It is incumbent upon all societies, having for their object the improvement of the soil, to diffuse the necessary information and to excite a spirit of research and enquiry in the community, more especially the agricultural portion, respecting this important subject.

The number of contributors to this department was fifty-two, as follows: From Lawrence, 19; Methuen, 12; Andover, 11; Danvers, 2; Haverhill, Topsfield, Middleton, Lynn, Lynnfield, Beverly, Marblehead and Salem, one each.

Your Committee recommend that the following gratuities be awarded:

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|---|---|
| To J. B. Barker, Methuen, best display of vegetables, | $3 00 |
| D. C. Stowell, Lawence, 2d best, | 2 00 |
| D. Luke, Lawrence, for a variety of vegetables, | 50 |
| W. R. Putnam, Danvers, good display of Corn, | 1 00 |
| Jonathan Berry, Middleton, | 1 00 |
| Moses Pettingell, Topsfield, | 100 |
| Adam Nesmith, Beverly, for the greatest varitey of Corn, | 1 00 |
| J. Carleton, Haverhill, for Dutton Corn, | 50 |
| Silas Wesson, Lawrence, for Corn, | 50 |
| G. H. Batchelder, Lynn, for Old Colony Corn, | 50 |
| Joseph How, Methuen, for stocks of Southern Corn well grown — 15 feet high, | 50 |
| Josiah Newhall, Lynnfield, for winter Wheat, | 50 |
| F. George, Methuen, for winter Wheat, | 50 |

| | |
|---|---|
| J. F. Hopkins, Andover, best display of Squashes, | 1 50 |
| B. Osgood, Lawrence, good display of Squashes, | 1 00 |
| Moses Pettingell, Topsfield, Squashes, | 50 |
| H. K. Oliver, Lawrence, " | 50 |
| Abner Hosmer, Lawrence, Squashes, | 50 |
| Solomon Holt, W. Andover, large crop of Squashes from one seed, | 50 |
| Plummer Weeks, Lawrence, Squashes, seed from California, | 50 |
| Charles Mills, Methuen, Squashes, | 50 |
| Oliver Mears, Methuen, " | 50 |
| John S. M. Colby, Lawrence, Squashes, | 50 |
| D. Merrill 2d, Methuen, Pumpkins and Squashes, | 50 |
| John Carlton, Haverhill, Pumpkins, | 50 |
| G. F. Thornton, Andover, Musk Melons, | 50 |
| S. H. Higgins, Andover, Water Melons, | 50 |
| Elijah Smith, Methuen, Water Melons, | 50 |
| A. Patterton, Andover, Potatoes, | 50 |
| Luke Cunningham, West Andover, Potatoes, | 50 |
| Benj. Rodgers, Andover. seedling Potatoes, | 60 |
| W. Perrin, Andover, Sweet Potatoes, | 50 |
| Rea Nourse, Marblehead, Onions and Parsnips, | 50 |
| A. A. Farr, Methuen, variety of Beets, &c., | 50 |
| Abner Hosmer, Lawrence, Beets, | 50 |
| Daniel Saunders, Lawrence, Ruta Baga, | 50 |
| John Walsh, Methuen, Turnips and Onions, | 1 00 |
| W. H. Felton, Danvers, Onions, | 50 |
| Ballard Holt, Andover, Potatoes, | 50 |
| Alexander Ray, Lawrence, Scotch Kale, | 50 |
| Daniel Saunders, Jr., Lawrence, Cauliflowers, | 50 |
| J. M. Ives, Salem, Martynias, | 50 |
| Isaac D. Fletcher, Lawrence, Tomatoes, | 50 |

It will be perceived, from the above, that the greatest number of the contributors were from Lawrence, or its immediate vicinity — very few from the other sections of the county. The unpleasant condition of the weather during

the first day of the exhibition, undoubtedly, prevented many, more especially those residing at a distance, from sending contributions.

Your Committee were highly gratified with the fine accommodations furnished for the display of the various specimens. The additional amount placed at their disposal to be awarded in gratuities exerted a favorable influence towards increasing an interest in this department of the exhibition. They recommend that an additional amount be appropriated the next season; and that the Society in future encourage with a high degree of liberality this branch of agriculture, so important to the interests of this County. They sincerely trust that in future, contributions will be received from all sections of the county and not be confined, as it frequently happens, to the immediate vicinity of the place where the exhibition is held. They respectfully request all cultivators of the County, to visit the exhibition the next season, to bring specimens of all their products, and those who cannot attend personally, to send the same by one of their neighbors. It is not necessary to bring large quantities of any one article, but a small sample of all — as the varieties of Indian Corn, Rye, Wheat, Potatoes, Beets, Squashes, &c., &c. The public will then have an opportunity to form a fair and impartial opinion of what can be raised in old Essex. This County has materials within herself to make a grand display. If farmers and amateurs will only make a little exertion, this object will be accomplished.

H. WHEATLAND, *Chairman.*

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## CLOTH AND HOSIERY.

*The Committee on Cloth and Hosiery award the following gratuities:*

To Mary B. Chandler, of Andover, (blind from birth,) for one pair of men's woolen socks, 50

To Mrs. H. B. Plummer, Salem, 3 pairs cotton hose, 50

To Mrs. Mary Ann Wood, Lawrence, 1 pair of men's woollen gloves, 50

To Mrs. A. K. Ritter, Lawrence, 2 linen towels, 50

To Sarah Park, Methuen, "in her 83d year," 2 pairs silk hose, $1 00

To Mrs. H. M. Richardson, West Andover, for 2 pairs hose. 1 00

There were exhibited from the Naumkeag Steam Cotton Co. Salem, 15 pieces of Cloth, consisting of one pair of Bleached Cotton Blankets; 1 pair of Brown do; 2 pairs Linen fold 1 pair Bleached Petersham; 1 pair of Pink do; 1 pair of Pink flannel; 2 pair Bleached do; 1 pair Brown do; 1 pair Brown Jeans; 2 pair of Bleached do; all being of a texture and workmanship not to be excelled if indeed they can be equalled, and for which the thanks of the Society are presented.

G. W. Benson, *For the Committee.*

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*The Committee on Quilts, Counterpanes, Carpetings and Rugs Report:*

1st Premium of $4.00 to Mrs. George A. Doe, of Lawrence, for a Patch Work Quilt

2d Premium $2.00 to Mrs. V. Danforth, of Lawrence, for a Flannel Patch Work Quilt.

Gratuity of $1.00 to M. W. Ricker, Lawrence, for a Patch Work Quilt.

50 cts. to Eliza A. Howe, Lawrence, Patch Work Quilt.

1.00 to A. R. Brewster, Lawrence, Knit Quilt.

75 cts. to Mrs. John Webster, Lawrence, Patch Work Quilt.

75 cts. to Mrs. E. P. Merrill, Lawrence, Patch Work Quilt.
1.50 to Miss F. Berry, Andover, a fine wrought Patch Work Quilt.
75 cts. to Miss E. Josselyn, Lawrence, Knit Quilt.
50 cts. to Sophia A. Howard, Lawrence, Patch Work Quilt.
50 cts. to Mary Cahill, 1 Silk Patch Work Quilt, Lawrence.

CARPETINGS.

1st Premium 5.00 to Lydia Babson, Newburyport, 1 ps. List Carpet made whole.
Gratuity 1.00 to William Truelan, Andover, 1 ps. List Carpet, would have received 2d premium, but not enough in quantity.

RUGS.

1st Premium of 3.00 to Mrs. J. W. Wellman, Lawrence, for Wrought Hearth Rug.
2d Premium 2.00 to Mrs. William Hayward, place not named, for Hearth Rug.
Gratuity 1,50 to S. W. Berry Middleton, for Braided Hearth Rug, superior workmanship.
75 cts. to C. S. Foster, Lawrence, for Hearth Rug.
1.25 to A. Colburn, Lawrence 2 Wrought Hearth Rugs.
75 cts. to E. M. Millett, Andover, Wrought Hearth Rug.
50cts. to Mary B. Wilson, Lawrence, Wrought Hearth Rug.
75 cts. to Sarah A. Hunt, Lawrence, Patch Work Rug.

A. W. STEARNS, *Chairman.*

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## LEATHER AND ARTICLES THEREFROM.

*The Committe on Leather and articles manufactured therefrom, have awarded the following premiums and gratuities, viz:*

To Tristram Brown, of Georgetown, for the best pair of thick Boots, the 1st Premium of $3 00
To Stickney & Co., of Groveland, for 2d best do. 2 00

To Tristram Brown, of Georgetown, for the best pair of Calf Skin Boots, the 1st premium of 4 00
To Stickney & Co., of Groveland, 2d best do. 2 00
To Parker & Curtis, of Groveland, for the best pair of Calf Skin Shoes, the 1st premium of 2 00
To Oscar Phillips, of Danvers, for the best pair Ladies' Walking Shoes, a premium of 2 00
To John I. Ladd, of Groveland, for Ladies' Grafton ties, a gratuity of 1 00
To Parker & Curtis, of Groveland, for Men's Oxford ties a gratuity of 1 00
To W. H. Balch, of Groveland, for Men's Kip Boots, a gratuity of 2 00
To George French, of North Andover, for an elegant Chaise Harness, a gratuity of 6 00
To Warren & Bryant, of Lawrence, for specimens of Card Clothing, a gratuity of 5 00

*For the Committee,* LEWIS ALLEN.

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## FANCY ARTICLES.

*The Committee on Fancy Articles, and all other articles not included in the duties of other committees, having attended to the duties assigned them, would respectfully report:*

That on entering upon the discharge of their duties, your committee found placed at their disposal a very great variety of articles. And so many were so very meritorious, that we found the task of making a just discrimination extremely perplexing.

A large number of beautiful contributions were made, after the time assigned by the trustees for receiving them. Among which we notice two beautiful pictures from Misses. J. Weston of Lawrence. An artificial leg of exquisite workmanship. Some beautifully turned horse shoes from Mr. Whittmore, of Hamilton.

The specimens of Room paper, by the Lawrence Charetr

Paper Co., commanded universal admiration. Several contributions were made by gentlemen, who did not desire that your committee should award any gratuities to them. And we notice among these, some beautiful articles of furniture from the Ware House of Messrs. Whittier & Allen, of Lawrence. A hand driller for iron, from Mr. Whittier of Lawrence the principle of which exhibited great ingenuity. A model of a pump and also the model of the running front of a Rail Road Car, from Mr. Whittier, of N. H. were deserving notice.

Your committee cannot close this report without making "honorable mention" of the great variety of needle work;—the beautiful specimens of worsted work;—some beautiful specimens of pictures in water colors,—Also the specimens of picture frames composed in part of leather, the work of young ladies.

After much deliberation your committee recommend the following premiums and gratuities.

PREMIUMS.

| | |
|---|---|
| Martha Gerrish, Newburyport, best specimen wrought lace. | $1 50 |
| Martha E. Dole, Methuen, 8 years of age Seed and bead bag. | 100 |

GRATUITIES.

| | |
|---|---|
| Eliza Howe, Lawrence, Lamp Mat. | 1 00 |
| Sarah L. Taylor, Lawrence, Lamp Mat. | 1 00 |
| Sarah E. White, Lawrence, Lamp Mat. | 75 |
| Abby A. Richardson, Andover, 2 Crayon drawings. | 1 00 |
| Mary A. Potter, Lawrence, Crayon drawing. | 75 |
| C. A. Richards, Lawrence, Crayon drawing. | 1 00 |
| Harriet Hubbard, Lawrence, Crayon drawing. | 1 00 |
| Emma H. Pratt, Lawrence, Crayon drawing. | 50 |
| Mrs. O. Bryant, Lawrence, Lamp Mat. | 75 |
| H. W. Josslyn, Lawrence, 2 Tabourets, (wrought.) | 75 |
| Lucy A. Chase, West Newbury, wrought chair covers. | 50 |
| H. W. Josslyn, Lawrence, wrought picture. | 50 |

| | |
|---|---|
| Sarah E. Davis, North Andover, wrought picture. | 50 |
| Mary F. Forbes, Lawrence, wrought picture. | 50 |
| Ellen M. Whitney, Lynnfield, wrought picture. | 50 |
| James Fearenside, Lawrence, 2 cases Butterflies. | 50 |
| Mrs. Gilman Shaw, Lawrence, wrought Muslin. | 1 00 |
| Mary J. Abbott, Andover, wrought Muslin. | 1 00 |
| Abby J. Chandler, Andover, wrought Muslin. | 50 |
| Mrs. E. D. Slader, Lawrence, Vase worsted flowers. | 1 00 |
| Eliza Willis, Salem, wrought Slippers. | 50 |
| George W. Strickland, Beverly, wrought worsted picture "Eva and Topsey." | 1 00 |
| Sarah J. Whitney, Lawrence, Fancy Box. | 57 |
| Caroline Furbush, Lawrence, Sofa Pillow. | 50 |
| Mary J. Furbush, Lawrence, wrought Slippers. | 50 |
| Mrs. S. H. Austin, Lawrence, Pebble Vase. | 50 |
| A. A. Newton, Lawrence, Lamp Shade. | 50 |
| A. A. Parsons, Lawrence, Crayon drawing, | 1 00 |
| Mrs. L. R. Springer, Lawrence, Case Millinary. | 1 00 |
| Miss. E. P. Richardson, Methuen, Case Millinary. | 1 25 |
| A. A. Parsons ,Lawrence, Sofa Pillow. | 50 |
| Mary J. Grovner, Methuen, Vase Artificial Flowers. | 50 |
| Mrs. H. Titcomb, 81 years of age, Methuen, 1 pair Long Mitts. | 50 |
| George W. Hills, Lawrence, Case furnishing goods. | 1 00 |
| Wm. R. Spalding, Lawrence, Case furnishing goods. | 1 00 |
| Messrs. Keyes & Benthall, Lawrence, Case embroidery. | 1 00 |
| T. W. Currier, Lawrence, Yankee Settee. | 2 00 |
| S. A. Pillsbury, Andover, 2 Ottomans. | 50 |
| Mrs. A. S. Jordon, Lawrence, 1 Ottoman. | 1 00 |
| Mrs. M. J. Hunt, Lawrence, Case Millinary. | 75 |
| E. T. Bridge, Lawrence, Case of Stuffed Birds. | 50 |
| S A. Pillsbury, Andover, Feather Brush. | 50 |
| John Ryan, Lawrence, Ivory Cane. | 50 |
| Mrs. E. N. Walton, Lawrence, Oil Painting. | 75 |
| Ellen Grover, Lawrence, Oil Painting. | 50 |

| | |
|---|---|
| M. G. Jackman, Methuen, Specimens Netting, Mats and Baskets. | 50 |
| S. A. M. Algier, Methuen, Specimens Netting. | 50 |
| E. A. Knowles, Lawrence, Ottomans. | 50 |
| Ann G. Poor, Andover, wrought sampler. | 50 |
| Martha A. Averill, Middleton, Tufted Lamp Mat. | 50 |
| Martha A. Averill, Middleton, wrought Taborets. | 50 |
| Helen A. Holman, Lawrence, Worsted Lamp Mat. | 50 |
| Mrs. Dr. Allen, Lawrence, Antique Suit. | 50 |
| A. Hall, Lawrence, Case Dagurreotype pictures. | 1 00 |
| E. T. Bridge, Lawrence, Case Dagurreotype pictures. | 1 00 |
| F. G. Littlefield, Lawrence, Case Silver Ware. | 1 00 |
| Lydia Gordon, Lawrence, Fancy patch work. | 50 |
| Ann F. Gordon, Lawrence, Lamp Mat. | 50 |
| Isabella Florence, Lawrence, wrought Handkerchief. | 50 |
| Harriet Livemore, Lawrence, 2 wrought Skirts. | 50 |
| Adelia Herbert, Lawrence, 2 Ottomans. | 50 |
| L. O. Johnson, Andover, Drawings. | 1 00 |
| M. A. Patterson, Lawrence, wrought Scarf. | 50 |
| Caroline A. Marshall, Lawrence, wrought Scarf. | 50 |
| Florence Talbot, Lawrence, wrought Scarf. | 50 |
| E. A. Tenny, Byfield, 2 pair Infant Shoes. | 50 |
| Ellen Marshall, Lawrence, wrought Bag. | 50 |
| H. B. Plummer, Salem, Cigar Case, and Watch Stand. | 50 |
| S. H. Elliott, Lawrence, Dental work. | 50 |

NATHANIEL WILSON. } *for the*
OLIVER BRYANT. } *Committee.*

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## DAIRY.

*The Committee on the Dairy Report:*

That there were eight entries of Butter submitted to their inspection. One failed in quantity, to comply with the Society's regulations. To the remaining seven parcels, the Com-

mittee gave the most patient inspection, and applied all the various tests at their command.

They award premiums as follows:

First premium of 10 00 to parcel No. 2, belonging to Chas. P. Preston, North Danvers.

Second premium of 8 00, to parcel No. 4, belonging to Jonathan Berry, Middleton.

Third premium of 6 00 to parcel No. 3, belonging to Chas. P. Preston, North Danvers.

There were two parcels of Cheese entered which in the opinion of the Committee were not of that "decidedly superior quality," which the rules of the Society require to entitle either parcel to a premium. The Committee would suggest the inquiry, whether the interest of an improved and progressive agriculture like that of Essex County, is to be further advanced by the present system of premiums for the Dairy. Encircled as is our County by a number of prosperous cities—and filling up as are all our towns, with a busy and thriving population, denser than any other of equal extent in the United States—can we, by any premiums which this Society may offer, induce our farmers, with the present and rapidly increasing demand for milk, to go extensively into the production of Butter or Cheese? Your Committee think not; and that the time has come for a revision of your Dairy premiums.

For the Committee, RICHARD P. WATERS.

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## JONATHAN BERRY'S STATEMENT.

I present for your inspection a box of butter containing sixteen pounds, being a sample of 620 pounds and 435 quarts of milk, equal to 50 pounds of butter, making 670 pounds of butter made from seven cows, between the 20th May, and

25th of September. The cows have been kept upon a common pasture with corn fodder daily and bone-dust once a week the latter part of the season.

PROCESS OF MAKING.

The milk is strained into tin pans and set in a cool cellar where it remains from 36 to 48 hours, according to the weather, care being taken to take off the cream while the milk is sweet. The cream is put into a vault made in the bottom of the cellar for that purpose. We churn once a week. After it is churned the buttermilk is thoroughly worked out, the butter is salted with about an ounce of salt to the pound, and the next day weighed out for market.

Middleton, Sept. 27, 1853.

## CHARLES P. PRESTON'S STATEMENT.

I present for examination a pot of June and also a box of September butter, samples of Eight Hundred Twenty-Eight pounds made during the four months next following May 20th of the present year, the dairy averaging nine Cows.

The milk is strained into tin pans and placed in the cellar where it remains from thirty-six to forty-eight hours when it is skimmed, and the cream placed in a vault made for the purpose until churning, which is done once a week.

The butter is worked by hand until the buttermilk is completely worked out, and salted with from three-fourths to one ounce of salt to the pound.

The cows have common pasture till August 10th, when they are fed by an addition of corn fodder.

North Danvers, Sept. 27, 1853.

## PLOUGHING WITH DOUBLE TEAMS.

Eighteen teams were entered for ploughing, but fourteen appeared upon the field. Each lot contained one sixth of an acre. The land was a sandy loam, somewhat uneven, parts of it being much better to plough than others, which made it more difficult to determine upon the comparative merits of the work. We doubt not but if some of the teams had had better lands, they would have made smoother work.

Another difficulty under which the committee labored, was to compare the work of single ploughs with the double, and we think a poor ploughman will do best with a double plough. After mature deliberation the committee make the following awards.

The first premium of $8 to Frederick Simonds, of Andover. Work done with Prouty & Mears Michigan Double plough No. 85, 21, furrows, in thirty three minutes.

The second premium of $7 to Jacob Farnum, of Andover, work done with Ruggles Nourse & Mason single plough, deep tiller, eagle No. 95, in 24 minutes, with 18 furrows.

The third premium of $6 to John B. Jenkins, of Andover, work done with Prouty & Mears Double Michigan plough No. 85 in 34 minutes with 19 furrows.

The fourth premium of $5, to Samuel Furber, of Andover. The team consisted of a pair of oxen and a horse, work done with Martins single plough, eagle No. 50, in 28 minutes with 18 furrows.

The fifth premium of $4 to Richard S. Bray, of Newbury, work done with Prouty & Mears, single plough, No. 72, in 29 minutes, 18 furrows.

W. R. Putnam, *Chairman.*

## PLOUGHING WITH SINGLE TEAMS.

There were nine single teams on the ground and they performed their work well.

The committee recommend that the several premiums be awarded as follows.

The first premium of seven dollars be awarded to J. Longfellow, of Byfield. Ploughed with Prouty and Mears plough, No. 25.

The second premium of six dollars be awarded to Robert Jewett, of Byfield. Ploughed with Prouty & Mears plough No. 36.

The third premium of five dollars be awarded to Wm. H. Walcott, of Danvers. The work performed with Ruggles, Nourse & Mason's Plough No. 73 1-2.

The fourth premium of four dollars be awarded to Jesse Kimball, of Andover. The work performed with Prouty & Mears Michigan Plough, No. 85.

The fifth premium of three dollars be awarded to Jedediah H. Barker, of Andover. The work performed with Prouty & Mears Plough No. 154.

JOSEPH HOW, *Chairman.*

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## PLOUGHING WITH HORSE TEAMS.

*The Committee appointed to award the premiums offered by William H. Osborne, Esq., of Lynn, for the encouragement of Ploughing with horses, Report:*

That a less number of competitors appeared than was expected. But four teams were entered. One-sixth of an acre was assigned to each team, numbers from 43 to 46.

The lots of Land were drawn as follows:

No. 43, William B. Richards, of Georgetown.

" 44, John and Albert Jenkins, of Andover.
" 45, Rufus Slocumb, of Haverhill.
" 46, Henry B. Cloutman, of Marblehead.

One other team was presented, but the title to the same was such that the Committee could not under the rules of the Society permit it to compete for the premiums. Yet it was permitted to plough and the work was done in fine time and very well.

The work was done in from 27 to 33 minutes from the start, and was as thoroughly done as the Committee have ever witnessed. The work was so well done that the Committee were not unanimous in awarding any of the premiums without discussion and careful deliberation.

They award the premiums as follows:

To William B. Richards, of Georgetown, the first premium of $25 00

Plough, Prouty & Mears, No. 155.

To John and Albert Jenkins, of Andover, the second premium of 15 00

Plough, P. & M's., Michigan, No. 85.

To Henry B. Cloutman, of Marblehead, the third premium of 10 00

Plough, Ruggles, Nourse & Mason's, No. 73 1-2.

The work done by Mr. Slocumb was equal to and in the opinion of the Committee better than any other on the ground until the last two furrows, in turning which the skill and ability manifested up to that time seemed to have deserted him. A fact which is inexplicable to the Committee.

The Committee regret that the generous donor of these premiums was not present to witness the performance.

For the Committee, N. W. Harmon.

## WORKING OXEN.

*The Committee on Working Oxen Report:*

Twenty-one pairs of oxen entered, only fourteen of which appeared to compete for the premiums offered by the Society.

The power and training of the oxen were tested with a load of stone weighing forty-one hundred pounds loaded on an ox-wagon, which would probably weigh about 24 hundred.

The oxen generally appeared to have been well trained, and also well fed, and it was with some difficulty that the Committee arrived at a conclusion how the premiums should be awarded, as many of the largest, handsomest and most powerful oxen were deficient abacking the load, and altogether inferior in that essential qualification as good workers to the smaller oxen. After mature deliberation the Committee came to the conclusion to award.

To Samuel Jenkings, of Bradford, the first premium of $10 00

For his four year old oxen which in the judgment of the Committee would not weigh more than 24 hundred and evinced uncommon power and good training.

To Richard S. Bray of Newbury, the second premium of 8 00

To Charles M. Davis, of Byfield, the third premium of 6 00

To Robert Jewett, of Byfield, the fourth premium of 4 00

D. S. Caldwell, *Chairman.*

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## STEERS.

The Committee were gratified to find so many good steers in the pens, and regret that there were not more pre-

miums to be awarded; and it was in some cases with difficulty that they could decide, which were the most worthy of the several premiums.

There were in the pens seven pairs of three years old steers; four pairs of two years old, and three pairs of yearlings. There was also a good pair of three years old steers entered for exhibition to-day by David Webster, of Haverhill.

The Committee recommend that the first premium of seven dollars, and second premium of six dollars, be awarded to David S. Caldwell, of Byfield, also the first premium of six dollars on two years old steers, to Mr. Caldwell, and the second premium of four dollars, to Alfred Kimball, of Bradford.

They also recommend that the first premium on yearlings of four dollars, be awarded to Richards S. Bray, of Newbury, and the second premium of three dollars, to Joseph Kittridge, of Andover.

In the opinion of the Committee the following persons are entitled to mileage, Nathaniel Peabody, Bradford, for one pair of steers, Jacob Farnum, Andover, four pairs, David D. Bailey, Byfield, one pair.

JOSEPH HOW, *Chairman.*

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## FAT CATTLE.

The Committee on Fat Cattle, having attended to their duty by carefully examining all the Cattle presented for premium, report that there were entered for premium seven yokes of Oxen, one single Ox, and one Cow, as follows, viz:

One pair of oxen by Joseph How, of Methuen, large and very fine cattle, weighing 2120, and 1992, say 4112 lbs., the pair, for which they award him the Societies first premium of $10 00

One pair of oxen by Moody Andrews, of Topsfield, very fine cattle, weighing 3165 lbs. and they award him the second premium of 8 00

One single Ox, by Jacob Farnum, of Andover, a fine animal, for which they award him the third premium of 6 00

There were also several other very fine fat cattle deserving particular notice, and had the Committee other premiums at their disposal they would cheerfully have awarded one to William F. Porter, of Bradford, for his oxen, being very fine boned and well fatted animals; and also to J. W. Andrews, of Boxford, for his oxen, being a fine pair, weighing 3715 lbs., and one of them an unusually well fatted ox.

There were three other pairs of oxenente red, viz: One by J. Longfellow, of Byfield, weighing 3200 lbs., having gained in weight 600 lbs. in the last twelve months; one by Orlando Abbot, of Andover, and one by Hiram Young, of Newbury, and one young cow, by Otis Bailey, of Andover. And the Committee would further say, that the exhibition of fat cattle, in their opinion, was superior to any former exhibition they have ever witnessed, and is very creditable to the contributors, and also to the good old County of Essex, and they would also recommend that mileage be allowed to all contributors who did not receive premiums, coming within the rules of the Society.

ANDREW DODGE, *Chairman.*

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## HEIFERS.

*The Committee submit the following report:*

Three classes of premiums were offered on heifers, for those of three years, two years, and one year old. No

entries were made for those of three years old. Four entries were made for those of two years. The first premium of five dollars they award to Ezra Merrill, of Andover, for his heifer in milk. The second of four dollars, to Dean Robinson, of West Newbury, and the third of three dollars, to Otis Bayley, of Andover. Of heifers of one year old, eight entries were made. They award the first premium of four dollars to Rufus Slocumb, of Haverhill, the second of three dollars, to James Poor, of Andover, and the third of two dollars, to Josiah Lovett, of Beverly.

A two year old heifer belonging to Charles M. Davis, of Byfield, was entered, which the Committee consider a superior animal, of good size, fine color and proportion, and had the appearance of being a fine milker, which would have entitled him to the first premium, had he have owned her six months, the time required by the rules of the Society. The Committee recommend mileage to be paid him.

WILLIAM R. PUTNAM, *For the Committee.*

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## MILCH COWS.

The Committee on Milch Cows regret that there was not a better Show of animals of this class; — and indeed they may say that, for several years past, there has been quite a falling off, both in numbers and quality, of the cows exhibited at our Shows. It is believed by the Committee that there is a large number of very superior milkers in the county, but, for reasons unknown to your Committee, they are not generally brought forward at our Exhibitions. It would certainly be desirable to know something about these cows, as to their breed and yield in milk and butter, that the community might avail themselves of such statements and procure calves from the cows for raising. The Chairman of this Committee has a large and valuable cow, which he was

unwilling to risk over the Rail Road to Lawrence, and he appends to this report a statement of her yield, in the hope that his example may hereafter be imitated by others.

Moses Newell, of West Newbury, presented for exhibition only, three cows, one 11 years old, of the Durham breed — one Durham and Ayrshire, and one Ayrshire — also two calves. These cows had the marks of being extremely good milkers, but were not in so good condition, as to flesh, as the draft made upon them required they should be. In the opinion of the Committee, the better the milker, the closer she should be looked after as to the quantity of her feed; and they do not subscribe to the general belief, that a good milker must necessarily be thin in flesh.

There were but five cows entered for premium, and the Committee award the first premium of $10 to Samuel Southwick, of Danvers, the second premium of $9 to James Poor, of Andover, and the other three animals, not coming within the rules of the Society, are not entitled to a premium.

JOHN ALLEY, 3d. *For the Committee.*

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SAMUEL SOUTHWICK'S STATEMENT.

I offer for examination a cow of the Galloway or no-horn breed, 8 years old. She calved in March, 1852, and has continued to give milk ever since. I have kept an account daily as I sold it to my neighbors. She has averaged 9 quarts a-day for the whole period, amounting to 4932 quarts; the quality of the milk is esteemed first rate for family use. We have not used it for butter, selling to better advantage for 4 cents a quart in summer, and 5 cents in winter. I have given about 6 quarts of shorts daily, besides common pasture feed in summer, and good hay in winter.

Lawrence, September 28, 1853.

### James Poor's Statement.

I offer for premium my Fountain cow, of native breed, nine years old. She had her first calf at three years old, has had one every year since, and has never dried for these six past years. She calved June 26th, 1852; again May 20th, 1853. She had seven days sickness that month, in which I kept no account of her milk. I began to weigh her milk the 1st of last October; weighed up to the night of the 27th September, 1853. She has given 8304 lbs. of milk in that period. She has made 310 lbs. 14 oz. of butter up to the 26th of this month, from which 338 qts. have been taken, which have not been set.

| | lbs. | oz. | | lbs. | oz. |
|---|---|---|---|---|---|
| 1852, Oct., butter, | 32 | 13 | April, butter, | 13 | 4 |
| Nov., " | 26 | 8 | May, " | 20 | 4 |
| Dec., " | 21 | 12 | June, " | 41 | 3 |
| 1853, Jan., " | 22 | 12 | July, " | 29 | 5 |
| Feb., " | 19 | 14 | Aug., " | 33 | 14 |
| March, " | 21 | 2 | Sept., " | 26 | 9 |

Her keeping, last winter, was clover and run hay, with three quarts shorts per day. In summer, common pasturing, except in July, when it was very dry, I fed her on hay night and morning.

A sample of her butter may be seen in the Hall.

North Andover, September 28, 1853.

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### Moses Newell's Statement.

The Subscriber enters for exhibition only, one starred cow eleven years old, a descendant of the bull Admiral, presented by Admiral Coffin to the State Society. She has not been dry for four years, has had a calf each year in the summer, is now nearly dry, and will calve in about six weeks.

The cow with the most white is six years old — dropped her last calf in February last — is from a white Durham cow and an

Ayrshire bull, imported by Mr. Cushing, of Watertown. She resembles the bull in form, color and general appearance.

The two cows above described have frequently given more than twenty pounds of milk at a milking.

The one horned cow is Ayrshire, five years old, is now dry, will calve probably in three or four weeks, is from the Cushing importation; gives rich milk, and about fifteen pounds at a milking, in good grass feed. I have presented them merely to show the varieties of stock. My experience shows that there are good milkers among all the varieties.

I also present for exhibition only, two calves, one with white spot, from a Durham cow, now lame, or she would be here: came the 27th of June last — has had the milk of his mother only. The other from the red cow, part Durham, dropped the 3rd of July last — fed like the other. They are from a bull dropped by the starred cow. I design to raise them for a pair of oxen.

West Newbury, September 27, 1853.

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### John Alley 3d's Statement.

I have owned my cow "Fanny" two years last April. She is a cross of the Ayrshire and Durham, and is seven years old. She calved the 18th of June last. The first week in addition to what the calf took, she made of

butter, 4lbs. 6ozs.

The calf was then sold. The week ending

| | | | | | | |
|---|---|---|---|---|---|---|
| July 2d, | sold | 58 qts. | of milk, | and | made | 8lbs. 2ozs. |
| " 8 | " | 70 | " | " | | 4 14 |
| " 15 | " | 81 | " | " | | 5 12 |
| " 22 | " | 88 | " | " | | 3 6 |
| " 29 | " | 74 | " | " | | 3 8 |

| | | | | | |
|---|---|---|---|---|---|
| Aug. 5, | sold | 77 qts. | of milk, | and made | 4lbs. ozs. |
| " 12, | " | 67 | " | " | 4 8 |
| " 19, | " | 88 | " | " | 2 2 |
| " 26, | " | 86 | " | " | 2 6 |
| Sept. 2, | " | 88 | " | " | 2 6 |
| " 9, | " | 90 | " | " | 1 9 |
| " 16, | " | 92 | " | " | 1 8 |
| " 23, | " | 90 | " | " | 1 10 |
| " 29, | " | 77 | " | " | 1 2 |
| | | 1128 qts. | | | 51lbs. 3ozs. |

Lynn, Oct. 29, 1853.

## BULLS.

*The Committee on Bulls have examined the Animals entered and respectfully report;*

That twelve Bulls were entered for premiums. Eleven only were upon the ground. The Alderney Bull entered by Mr. Waters was wanting. The Committee were sorry that they did not have the opportunity to examine this bull in company with his brethren of different blood. Besides, a full blooded Alderney is an animal which has never been exhibited at our Show, and from the reputation of the stock and the real beauty of the animal, would have attracted much attention.

Dr. Robinson, of West Newbury, entered a Bull three years old, one quarter native, and three-fourth North Devon. This bull was a very fine one, combining more good points than any other upon the ground, and was backed up by two heifer calves of his getting, which promise not only to be handsome animals, but good milkers. This is the only certain evidence which can be furnished a Committee of the good qualities of a bull, and we wish that in all cases, when

a bull is offered for premium, specimens of his stock would accompany him, — so that premiums may be awarded more justly.

The Committee, therefore, recommend that the first premium of seven dollars be awarded Dean Robinson of West Newbury.

William Cutler, of Andover, entered a native bull two years old, black brindled in color, and a very fine animal. They recommend that the second premium of six dollars, be awarded to Mr. Cutler, for his bull. They recommend the third premium of five dollars, to B. H. Farnum, of Andover, for his bull three years old, three-fourth Devon, and one-fourth native.

A very large sized and well marked bull calf was entered by Eldred S. Parker, of Groveland, five months old. The Committee recommend a gratuity of two dollars to Mr. Parker for his calf.

They also recommend a gratuity of one dollar, to Edwin Sargent, of Lawrence, for his bull calf nine weeks old.

Jedediah Farnham, of Andover, entered a bull two years old, a cross between the Devon and Durham short horn, as was stated to the Committee, but from the size of the animal it was evident that the blood of the latter prevailed. He was a very well made, and a very large animal for his age, weighing 1220 lbs. If this bull had not taken the Society's second premium last year, it would have been awarded him the present year.

A good looking bull was observed by the Committee or some of them, the second day, which was not in the pens the first day of the show, nor was any entry made of him with the Secretary. If he had been properly entered and exhibited, he would have probably taken the second or third premium.

The Chairman of the Committee desires to say a word or two generally, in relation to the awarding of premiums for

bulls, in this county, which may in part as well apply to other animals.

At one time, a question of great difficulty, which occasioned much discussion and antagonism among agricultural writers, was this, "whether the breed of live stock be susceptible of the greatest improvement, from properties conspicuous in the male, or from those conspicuous in the female parent?" Prize essays have been written, and the subject has been most thoroughly discussed, until the unanimous verdict of both practical and scientific observers now is, that, other things being equal, the male has far more influence than the female in fixing the characteristics of the progeny. The greatly superior value which the Bedouin of the Desert, places upon his mare, over his horse, has been frequently and triumphantly cited in opposition to this theory. But Abd-el-Kader in his reply to General Daumas, who has just published a work entitled "The Horse of the Desert," puts that matter at rest most naturally and conclusively. The Arab Chief in reply to the French General, says "You ask me why, if the offspring partakes more of the male than of the female parent, the mares, notwithstanding, sell for higher prices than the horses. The reason is this; he who owns or purchases a mare, hopes that all the while he is making use of her, he will obtain from her a numerous progeny,—but he who owns or buys a horse derives from it no other benefit than its services for the saddle, as the Arabs never take money for the use of their horses, but lend them gratuitously.

This fact being established, every man sees and will admit, that in the improvement of our cattle, the bull must perform the most important part. There is no doubt of the truth of the theory, and being true, how does the practice of our farmers, in the main conform to it? Why, with some exceptions, but generally, the calf that comes late in the season, when veal is at the lowest, and it is so diminutive in

size as to be of little value to the butchers, is reared for a stock-getter, for anything will do for a bull. Not many of *these* animals are exhibited at our shows, for their owners would be ashamed of them—but a very large proportion of the calves dropped in this county, are sired by bulls of this description raised here or driven from the neighboring State of Maine.

One of the exceptions may be as bad, and it is this. Occasionally, a very large bull calf is dropped, and the owner, if he cannot afford to raise him himself, advertises his wonderful merits, and some inexperienced man purchases him, for his size alone, never asking or caring for his ancestry; but his extraordinary size which may be his worst defect, is regarded as sufficient to overcome any and all defects. Such animals are generally pampered, crowded and kept with a particular eye to the cattle show. The neighbors far and near are called in to visit him, and an animal well fed, in high condition, with a sleek coat, is always an object of attraction—for as has been well said by an Englishman of good sense, "fat will cover faults."

These last find their way surely to the shows, and friends and neighbors of the owners are all there, prejudiced in their favor and proclaiming their comparative merits. Now there are few men in our county, (and I say it with all deference) who are judges of cattle in the highest sense of the word, who are able to discern merit or the promise of it under a rough skin an unpampered condition, or who have strength of mind sufficient to reject a defective form, which from its sleek covering and high condition allures the common and unpracticed eye. The calves got by such bulls would probably be large, but so coarse in bone and in general characteristics as to be comparatively useless.

This society regarding the importance of the bull, have always offered liberal premiums for the best animals of this class, upon condition that they be kept for use within the county for a certain length of time. Why this condition?

For no other reason than that the stock of the County might be improved by them. A bull however handsome has no value in himself. It is only his superior *get* which makes him valuable. Now of all the prize bulls for the last thirty years, what one of them has been the father of prize bulls? We must look at things as they are, not as we think they ought to be, and who ever recollects a bull entered for a premium claiming to be the offspring of a prize bull.

Now if the instance cannot be found, or is so rare as to be an anomaly, are we improving our stock? I heard an inteliigent gentleman, a butcher, now 65 years old, residing within the County, who has always had an eye for a good cow, not long since, says that the cows in our county are no better now than they were forty years ago. If this is not true in its fullest extent, itcomes very near it. And why is it? Because, nobody among us breeds cattle with any system, with any definite object in view, with even the exercise of common judgment. And we might perhaps justly substitute State for County, excepting those gentlemen who breed purely from imported stock—which from their beauty of form—for all of them have an aptitude to fatten—always command high prices. The great object of all English breeders of cattle, has been to attain the greatest weight and maturity in the shortest time and on the least quantity of food. The Aldreneys are not included in this remark, but they have been so little time among us, that it is impossible to speak understandingly in relation to them.

But I cannot go into the subject of breeding. I wish more particularly to suggest the adoption of some system by which committees and competitors shall be governed. The Societies of other States, copying the example of England, have established scales of points, by which all the foreign breeds of cattle are judged, and no animal not having a certain number of points, can in any event obtain a premium. I hope that the Secretary of the Board of Agriculture, among all the other good things which he may recom-

mend, will suggest a scale of points by which to determine the merits of our native stock, and that it will be adopted by us. Then everybody, competitors as well as committees, would have something to guide them. Now one man regards the color and shape of the horns, another the setting on of the tail, another the shape of the head, one a coarse large framed animal, another a small compact one, and there are as many different principles, real or imaginary, which govern men in making up their judgment, as there are judges. In general now, if a man attends to the condition of his animal, has him as fat as possible, he is sure of a premium. These remarks are made generally, without any intention of applying them to the animals exhibited this year, for they were not so deserving of any such censure, as oftentimes has been the case in previous years. They are made simply because an evil exists which ought to be remedied, and attention is called to the subject with the hope that the remedy will be applied.

T. E. Payson, *Chairman.*

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## STALLIONS.

*The committee report,*

That there was no animal of this class entitled, in their opinion, to the first premium.

They recommend that there be awarded to William Peters, of Andover, for "Anglo Saxon," three years old, the second premium of 10, andthat there be allowed mileage, according to the rules of the Society, to Stephen J. Chase, of Byfield.

Joseph F. Clark, *Chairman.*

## BREEDING MARES.

*The committee report,*

That of Breeding Mares, with colts by their side, there were seven entries, many of which in the opinion of the committee were worthy of premiums, and they regret that no more than two were at their disposal. As it is a rule of the society not to award gratuities in such cases, they recommend that mileage be given on the animals that seemed worthy of it.

To Wm. R. Page, of Lawrence, first premium of six dollars. To David S. Caldwell, of Byfield, second premium of four dollars. Also to Andrew Dodge, of Wenham, mileage, to Jeremiah Coleman, of Byfield, mileage, and Samuel Jackson, of Bradford, mileage. WM. OSBORN, *Chairman.*

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## DRAFT HORSES.

*The committee have attended to the duties assigned them and report as follows:*

There were ten entries of Horses, only a part of which were on the ground, several of these were admirably trained, and are fine horses, giving proof of great power and draft, but as the Society offer but two premiums, they award to William M. Kimball, of Lawrence, the first and second premium of six and four dollars, for his two superior horses.

The committee regret that the horse of Stephen Moulton, was not entered in season for premium, or he would have been entitled to a premium.

The three horses of Messrs. Wilson and Allen, weighing 1170, 1200, and 1315 lbs., respectively were worthy of notice, and would be entitled to a gratuity if it were in the power of the committee to award it.

WILLIAM OSBORN, *Chairman.*

## COLTS.

*The committee on Colts report as follows:*

They are of opinion that Benjamin F. Jenkins, of Andover, is entitled to the first premium, of six dollars, for the best four years old colt.

Henry Barker, of Boxford, the second premium of four dollars for the second best.

Thomas E. Payson, of Rowley, the first premium of five dollars, for the best three years old colt.

Moody Bridges, of Andover, the second premium of three dollars, for the second best.

Joseph A. Berry, of Middleton, the first premium of four dollars, for the best two years old colt.

J. W. Andrews, of Boxford, the second premium of two dollars, for the second best.

George W. Sawyer, of Boxford, the first premium of three dollars, for the best yearling colt.

Jesse Smith, of Haverhill, the second premium of one dollar for the second best.

The committee, for mileage, would recommend as follows:

Jacob Farnum, of Andover,
Gayton Reynolds, do
G. W. Tucker, do
Wm. Ingalls, do
Charles Perley, of Boxford,

ENOCH BARTLETT, *Chairman.*

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## SWINE.

*The Committee recommend that premiums be awarded as follows:*

For Boars.—Cyrus K. Ordway, West Newbury,
(Suffolk,) 1st prem. $5 00

Moses J. Stevens, Andover, (Suffolk,) 2d prem. 3 00

For Breeding Sows.—Joseph Kittredge, Andover, (Suffolk,) 1st prem. 5 00

John S. Hill, Byfield, (Suffolk,) 2d prem. 3 00

Litters of Weaned Pigs.—John S. Hill, Byfield, (Suffolk,) 1st prem. 6 00

Joseph Kittredge, Andover, (2d prem.) 3 00

A large and fine lot of Suffolks were presented by Mr. Boyden, of Topsfield, but did not arrive in time to be entered for a premium. His statement will give some idea of what he is doing in propagating this favorite breed.

D. S. Caldwell, *Chairman.*

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Frederick Boyden's Statement.

I have entered for premium for lots of swine; to wit: One imported Suffolk boar, 19 months old. This boar is now in his common condition, having had no extra feeding or care; he has not cost me over one cent a day for feed since I purchased him, on the 5th of March last. I have never had him washed but once.

One full-blood Suffolk sow of the Stickney stock, with eleven pigs, all her own; her keeping will speak for her.

Four full-blood pigs from imported stock, both sire and dam—one boar and three sows—from full-blood sows from a Stickney sow, by my boar described above;—they have had no extra care, as I did not decide to send them to Lawrence until sundown this evening.

All the above pigs were got by the above boar, and are designed by me for breeders.

The two last lots of pigs have had no grain since they were weaned.

*Topsfield, Sept. 27th,* 1853.

## SHEEP.

The Committee report that two flocks of sheep only were offered for the Society's premiums, viz.: One lot consisting of thirteen South Downs, by Jacob Farnum, of Andover, and one other lot of six sheep of the Leicester breed, by Wm. F. Porter, of Bradford.

The Committee awarded the first premium of six dollars to Wm. F. Porter; and the second of five dollars to Jacob Farnum.

JOSIAH NEWHALL, *Chairman.*

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## POULTRY.

*The Committee having examined the specimens of Poultry, &c., beg leave to award to*

G. H. Batchelder, of Lynn, for the best white Shanghae, Burampootra, and black Bantam Fowls, and Aylesbury and Cayuga Ducks $5 00

Mr. Batchelder had also superior specimens of Chittagong Fowls, and some beautiful fancy Pigeons.

To Sumner Southwick, of Danvers, for the best buff and grey Shanghaes and Game Fowls 5 00

The grey Shanghaes particularly struck us as being the very best we have ever seen.

To A. T. Allen, of Lawrence, for the best Chittagong and white Bantam 3 00

To James Wolfenden, of Andover, for the best Bolton grey Fowls 1 50

They were well worthy of the gratuity awarded.

To A. L. Fryet, of Andover, for the best Golden Pheasant Fowls 1 00

To J. J. Gardner, of Andover, for the best Seabright Bantam Fowls 1 00

To A. K. Oliver, of Lawrence, for black Spanish Fowls 1 00

To B. Osgood, of Lawrence, for the best Dorking Chickens 50

To T. L. Quimby, for Shanghae 1 00

To J. M. Ives, of Salem, for grey Shanghae Chickens 1 00

To Jonas Holt, of Andover, for best and only Turkeys 50

Mr. Holt says they are a cross between the wild and domestic Turkey—are three and a half months old, and average ten pounds each. He hinks they are the best cross he ever obtained, and from the appearance of the young ones, your Committee are of the same opinion.

To G. G. Davis, of Lawrence, for Guinea Fowls 50

To A. P. Bateman, of Georgetown, for fancy Pigeons 2 00

To Jacob Allen, of Lawrence, for " " 2 00

By far the largest portion of the exhibition was composed of Chittagong, Shanghae, and other large breeds of fowls, which we are well aware sometimes command enormous prices from dealers and amateurs. We are of opinion, however, that their real value to the farmer is very much overestimated; their superiority in size being counterbalanced by their inferiority as layers, and the coarseness of their flesh. Dorking, Black Spanish, or some similar breed, will, we think, be found of more advantage to all persons who rear them for their legitimate end.

A. L. Peirson, *Chairman.*

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## FARMS.

The Committee on Farms have attended to their duties, and report to the trustees that only one farm has been entered the present year for premium, and that the farm of Josiah

Crosby, in North Andover. The Committee visited this farm the 23d of June, and were gratified with the improvements which Mr. Crosby had made, both in his buildings and in clearing up and reclaiming some thirty acres of mowing and cultivated land. To bring these reclaimed lands into that productive state to which they are capable of being brought, they require either underdraining or ditching; and further improvement Mr. Crosby intends making.

The Committee made a second visit on the 3d of October, and were pleased with the appearance of the crops, which had been harvested, and those still in the fields.* As an expression of their gratification at the improvements which have already been made, the Committee award the 3d premium of $20 to Mr. Crosby.

Your Committee were invited, in June, to visit the farm of Wm. F. Porter, in Bradford, and cannot but express the high gratification they experienced in viewing this splendid farm. There was such order in all the arrangements of the farm, such apparent skill in the execution of the various farm labors, that your Committee quite agree with their predecessors in awarding the Society's 1st premium, in 1851, to this farm.

The Committee would suggest to the trustees the expediency of revising the mode of offering premiums on farms; and they beg leave to propose the plan of entering farms for a period of not less than three years, to be viewed, as now, twice each year, and the first premium to be $100; and the second, $50. To your Committee it does seem important that some revised mode should be adopted, which it may be hoped will increase the number and grade of farms offered for the Society's premiums.

RICHARD P. WATERS, *Chairman.*

* It will be noticed that Mr. Crosby has *estimated* the value of his crops at a higher price than their present market value; and in the opinion of the Committee, the result, when the crops are all sold, may not equal his estimate; neither has he charged the crops with any manure.

### Josiah Crosby's Statement.

"In calling your attention to my farm, I feel some reluctance in consequence of the very prevalent idea among farmers, that none but large and decidedly model farms should be considered worthy of a premium. But notwithstanding this opinion, experience and observation have taught me that small farms declare the largest relative dividends, and in corroboration of this statement, I could, if my limits would permit, cite many instances of farms in this county, containing ten or twelve acres, that are made to produce annually a larger net income than others containing one hundred acres.

In conformity with these views, I have ventured to offer my humble farm for a premium, destitute as it is of all such pleasing associations as "paternal acres," ancestral oaks," or "venerable mansions," handed down from former generations; and I present my claim only upon the ground that he is a benefactor who makes two blades of grass to grow, where but one grew before. I will endeavor briefly to convince you that this much I have done.

I purchased my farm in the spring of 1841; it then contained about thirty acres, one half of which was completely covered with bushes. My first move was to commence an open warfare upon these "cumberers of the ground." For awhile they resisted manfully, and seemed to bid defiance to our attacks; but after a hard-fought battle, we found ourselves at last in full possession of the field. This field is now the best part of my farm, and is capable of producing two tons of English hay to the acre; but at the time I commenced work upon it, it would not have affurded subsistence for a solitary cow.

The other half of the farm at the time of my purchase, was a strong and rich, but cold soil, and for want of sufficient draining and manuring, it produced but scanty crops. It has been partially drained and had a liberal supply of manure. It is now in a good state of cultivation and produces large crops, but is yet susceptible of great improvement.

I have made several additions to my first purchase, and the farm now contains about sixty acres, all of which (with the exception of sixteen acres of woodland) is in a high state of fertility, and with a little additional draining and manuring, will compare favorably with any similar number of acres in the county.

I have built a barn and cellar 56 by 38 feet, with sheds, carriage-house, piggery, poultry yards, &c., attached, which has cost about $1,700; I have entirely remodeled and repaired my dwelling-house, at an expense of about $2,500; I have built a small greenhouse, with a cellar and well, for raising foreign varieties of grapes, which has cost about $160; I have made 200 rods of substantial stone wall, and have dug 350 rods of drains; I have set out about 300 fruit trees, comprising the choicest varieties of apples, pears, peaches, plums, cherries and appricots; I have hauled at least 500 loads of sand a distance of a mile and a quarter, which has been spread upon the land, and is now thoroughly incorporated with the soil, and has changed the character of it, preventing it from baking or cracking during severe droughts, and causing the crops to start much earlier in the spring; I have paid out in cash for manures about $500, and have made various other minor improvements on the farm.

But, as I have before stated, I do not enter my farm for a premium on account of its magnitude, or as being a model farm on a small scale; neither do I claim any superior mode of cultivation, but simply on the ground that I have taken it in a miserably dilapidated and worn-out condition, and have put it in such a state that it will compare favorably with a majority of the farms in our county.

The following statement will show the comparative condition of the farm when purchased, and as it now is:

Produce of Elm Vale Farm in 1841, say about five tons of hay, worth $75 00

Produce of the same for the year 1853.

| | | |
|---|---|---|
| 25 tons English hay, | $20 00 | $500 00 |
| 3 " Squashes, | 40 00 | 120 00 |
| 25 bushels Onions, | 60 | 15 00 |
| 350 " Potatoes, | 10 00 | 350 00 |
| 2500 heads Cabbages, | 60 | 15 00 |
| 60 bushels Oats, | 60 | 36 00 |
| 40 " Corn, | 10 00 | 40 00 |
| 25 barrels Apples, | 3 00 | 75 00 |
| Tomatoes, Cucumbers, Melons, green Corn and Peas, | | 35 00 |
| Cherries, Pears, Peaches, Quinces, &c. | | 25 00 |
| Pork fatted mostly upon milk and refuse potatoes, and Apples | | 90 00 |
| Calves. | | 18 00 |
| | | $1,454 00 |

No account is made of butter and milk, garden vegetables, fruit, &c. used in the family.

| | |
|---|---|
| Original cost of the farm, | $2,900 00 |
| Cost up to the present time about, | 10 00 |
| Farm expenses for 1853, | 516 00 |

Elm Vale Farm, North Andover, Nov. 15th, 1853.

## RECLAIMED MEADOWS.

The committee on wet meadows and swamp lands have the satisfaction to believe that the subject entrusted to their charge, is one of vast importance to the farming community, and is, every year, more distinctly appreciated.

Although the number of claims presented for consideration, is not so great as might have been expected in the county, still there are enough to present a distinct illustration of what can be done in the way of improvement, and to show the benefits that may be derived by doing it.

The several claimants have so fully stated the peculiarities of heir operations, that the committee do not feel called on to go much into detail, as to what they themselves have seen. And

they are the more willing to be relieved of this duty, as by an unfortunate combination of circumstances in relation to the notices of the entries, made by some of the claimants, their opportunities for examination, while the crops were growing, were not so complete as could have been desired. Their opinion, therefore, of the comparative merits of the claims presented, are made substantially from the statements submitted, of which, all who read them, will have the opportunity of judging, as have the committee.

A few general ideas seem to be essential to be regarded in relation to lands of this description.

First, the surplus water is to be removed, and completely removed. While any of this remains, so far, at least, there will be an effectual barrier to improvement. Ditches or drains for the conveyance of the surplus water, are to be constructed, and so far as practicable, covered, the better to increase the surface for cultivation, and to remove the awkwardness of the excavations, on the surface. This is particularly the case with ditches or drains, for the shore springs, and cross ditches or drains running to the drains in the center of the meadow or swamp operated on. (vida page 71.)

Drains laid with tide, made for this purpose, from two to four inches in diameter, at a cost of about four cents a foot, have come to the knowledge of the chairman, greatly improving the grounds on which they are laid. Without question, many parcels of what are generally denominated cold, spring land, would be doubled in value by properly laying one hundred rods of such drains to the acre. This mode of improvement has hitherto been but little regarded by Massachusetts farmers. It is coming much into use in wertern New York.

As to the depth to which these ditches or drains should be made, much will defend upon the depth of the mire and the hardness of the bottom,—generally *three feet* will be found quite sufficient to let off the water, if the meadow has ordinary slope or descent. There are few meadows, that have not some avenue for draining, that can be opened near at hand. Nature when

she built the one, took care to provide the other. There are few, " dismal swamps," or " sloughs of despond," about the farms of New England.

Another consideration, in undertaking an operation of this kind, is, how far is it expedient to carry gravel or other materials form the upland upon the surface of the meadow? Just so far, we should say, as may be necessary to give the surface, after the water is drained off, an operative firmness for sustaining the crops —and no further. We do not hold to spreading twice as much, in covering the meadow, as it will be worth after it is covered ; but would have all the operations in the process, conducted with an economy that will pay ; at the same time, with a thoroughness that shall forever remove the meadow character from the land. We are particular to notice this, because we have more than once seen meadows pretended to be reclaimed, that would not stay reclaimed.

In our observations upon this class of lands, we have repeatedly witnessed the benefits of the application of fertilizing liquids, much after the manner mentioned in the well drawn statement of Mr. Page, of the meadow improved on the Danvers town farm. If, as he proposes, the surplus fluids from the hog-yard and the receptacles of fertilizing materials about the dwellings, can be conducted and diffused over the two or three acres of grass land near by, we cannot doubt they will be amply sufficient to keep these lands in a condition capable of growing three or four tons of grass to the acre annually. We have seen, the present season, a field of ten acres, adjacent to a stable, where a large stock of animals was feed and stationed, so fertilized by the liquids accumulated in these stalls, as to add to the burden of grass at lest one and a half tons to the acre,—that is, to cause the entire field to yield three tons to the acre, when heretofore it has yielded only half this amount. This was on the beautiful farm of Richard S. Rogers, in Danvers, who while he expends, from his ample fortune, freely on his green houses and his fences by the way, ex-

hibits discriminating judgment upon his cultivated fields, and produces crops in great abundance.

One of the most interesting operations that has come to our observation on meadow lands, the present season, was on the farm of Thomas E. Payson, in Rowley. He has fifty acres or more, adjoining, where the peat or mud is from three to seven feet deep, so situated, as to be capable of being drained so as to admit a waggon with a common load of hay to pass on any par of it. Mr. Payson has cut narrow ditches about five feet apart, and thrown the mud on the beds between, and planted these beds with potatoes. In the autumn, when, the potatoes were gathered, he threw the vines into the ditches, levelled the ground and sowed grass seed. Where he pursued this course, last year on about three quarters of an acre he cut three tons of good English hay to the acre, the present season. In this way he contemplates bringing the whole into English mowing. The failure of the potato crop this year, by reason of the rot, prevented his forwarding his statement.

It will be observed that this improvement proceeds without carrying any material from the upland upon the meadow, except a common dressing of manure to start the potatoes. Consequently it must be done, if effectually done, at much less expense than is ordinarily applied. The great difficulty attendant upon covered drains, is the expense of their construction. Unless there may be on the farm, at times, a surplus of hands, and the work can be done at odd jobs, when other work is not pressing. Such, we understand, were the circumstances, under which much of the labor was done, in the experiment on the town farm in Danvers.

The experiments of Mr. Davis and Mr. Blaney, whereby unproductive lands were made to yield several tons of English hay to the acre, where none grew before, in the course of two years, simply by inverting the sod, pulverizing, manuring and seeding upon it, are most commendable and highly worthy of imitation.

The committee understand the offer of premiums made by the trustees to have relation mainly to improvements made within two

years next preceeding the time of the award; and therefore to exclude from their particular consideration, operations of longer standing; and to forbid their making an award for improvements that do not cover more than one year. In pursuance of these views, the claim presented by Mr. Hayes, of Lawrence, does not lay the foundation for an award the present season. Let it be followed out as effectually as it has been begun, and it will require an early riser to go ahead of it. It will be fairly in for the next year.

The claim presented by Dr. Merriam, of Topsfield, presents considerations of a different character. As early as 1808, his improvements are said to have been commenced, by whom it is not distinctly stated,—and from that time to the present, to have been graduually advancing, the land yielding the moderate crop of about one ton of hay to the acre, during this period. Without doubt, many tracts can be found, yielding, as much or more than this, where no improvements are claimed to have been made. What is wanted is, two blades, as least, of grass to grow where but one grew before. If we rightly understand from Dr. Merriam's statement that *one acre* of his land yielded *three tons* of good hay the present season, this was a good crop. What was done to this acre, thus to start it ahead of those adjoining, we do not learn from the statement.

The improvement made on Mr. Phillip's land adjoining, as described, must have been worthy of commendation. Why it did not obtain it from the committee, when presented, we do not understand. Nor do we feel that we have any authority to revise that decision. If the experiment were equal to the description of it, the proprietor has already found an abundant reward in his increased crops, as do most others who undertake improvements. The premium accruing from the land, cannot be withheld by any operation of prejudice or caprice, if any such should ever be supposed to exist.

The committee recommend the publication of the several statements as presented. Having compared them with all the candor in their power, the committee award

To Stephen Blaney, of Salem, the first premium of $15 00

To Adino Page, of Danvers, the second premium of 10 00

To M. H. Davis, of Danvers, the third premium, Colman's European Agriculture.

Had they other premiums at their command, they would cheerfully give them to the other claimants, as they believe their experiments to be worthy of such commendation.

J. W. Procter,
Joseph F. Ingalls,
Isaac Knowlton,
Horace Ware,
} *Committee.*

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Adino Page's Statement.

I offer for examination, and premium (if thought worthy of it) a piece of reclaimed meadow and run-land, situate on the town farm in Danvers, near the avenue that leads to the house, and easterly of the same. This parcel of land, previously to 1850, was usually known by the name of the "pond hole." The peat mud was several feet deep over the greater part of it — in some parts the mire was ten or twelve feet. It was supplied with water by springs oozing from the surrounding highlands, and was often impassable by man or beast, and so full of water as to have an offensive and forbidding aspect.

In the season of 1850, it yielded only about half a ton of the coarsest kind of meadow grass and rushes. In the autumn of that year, ditches were cut around the borders, so as to receive the water that came in from the hills; and cross-ditches were cut to an old ditch in the center, that was cleaned out, so as to let off the water at the southerly end. These ditches were cut across about three rods apart, thereby forming the land into beds of that width, and were covered with stones and turfs, so far as convenient to do so. Where the land would support a team, the plough was used to turn the sod; in other parts, it was broken and turned with spades and hoes. Nearly all the surface was covered

with gravel from the adjoining knolls, from one to twelve inches deep, according to position — making an average coating of material from the upland of five or six inches in depth. This was intermingled with the soil of the meadow, as thoroughly as it could conveniently be done.

In May 1851, the land was again dug over and smoothed as far as practicable, and then planted with corn, in the ordinary way, with a common dressing of manure placed in the hill. The crop of corn was fair, being about fifty bushels of sound corn to the acre. It was partially injured by the frosts, the land being too cold for corn. After the crop was taken off, the land was levelled and smoothed, with the harrow and hoes. In March, 1852, it was sown with herds-grass and red-top, just when moistened with a coating of light snow. But the seed did not catch well, and the growth that season was light. In the spring of 1853, the grass started in a promising manner, and completely covered the ground. No addition of fertilizing materials was applied. It continued to grow luxuriantly, yielding an abundant crop of excellent grass. On the three acres, we cut between nine and ten tons of hay at the first mowing, and full three tons at the second, being an average amount of four tons to the acre, for the season,— the best hay product grown on the farm.

Some additional improvements have been made since, by completing the arrangement of the ditches, so as effectually to let off all the surplus water — which is now drained to about eighteen inches below the surface of the land — and by arranging conduits, or fluid conductors, from the back-yard of the house, and the hog-yard, so as to convey the liquids from these establishments to the meadow, which being done, it is not easy to estimate the quantity of grass that may be grown thereon. It is safe to say that four tons to the acre can be grown annually, without any other dressing.

When it is considered that all this has been done on a worthless bog, without any extravagant expenditure, chiefly

by the aid of the inmates of the house, I feel a pride in presenting it to the notice of the Committee and Society: both because of its being a valuable improvement on the farm, and as an exemplification to others of what patience and perseverance will accomplish. Having no personal interest in the matter, and being entirely uncertain how long I shall remain in the position I now occupy, as master of the house, I feel that I may, without any impropriety, so far boast of what has been done.

*Danvers, October* 27, 1853.

I, Wingate Merrill, Chairman of the Overseers of the Poor, in Danvers, having been fully acquainted with all the operations above detailed, the same having been executed with the approbation of the Board of Overseers, am clearly of the opinion that the crop, the present season, has not been over-estimated by Mr. Page, the Master of the House.

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### Royal A. Merriam's Statement.

In the year 1808, forty-five years ago, (probably one of the first efforts made in the county, for redeeming bog meadows,) a piece of worthless meadow, the most worthless of any land on the farm, was operated upon, by covering with gravel and about two inches of loam from the roadside, and sowing down to English grass—and I have never known this land to produce less than one ton of English hay to the acre. This year, the crop was larger. A few bunches of meadow grass have occasionally made their appearance, which have been shaved off, perhaps half a dozen times.

In 1832 I engaged, with some ardor, in working over bog meadow, by leveling up a part of my garden, which bordered on a bog. Some more of the adjacent bog was, at that time, reclaimed; but I found that I was working at great disadvantage, on account of the superabundant water, and that I could not do much till my neighbor below should

open a drain for the water. The land, being parsonage had, like most of such lands, been suffered to remain in its native state.

Ten or twelve years ago, this parsonage land came into the possession of Richard Phillips, Jr., who took hold of it in good earnest, and opened a drain through for about one hundred rods, cleared off the bushes, and worked over the soil. Six or eight acres were thus worked over, two of which made an impenetrable swamp, inhabited only by reptiles and rabbits, and from which he cleared off and burned about two hundred tons of bushes and brambles, and, in the language of the workmen, "bull's-heads," being bunches of serge grass, the bigness of a flour barrel, and half as high.

This piece of work is thought, by all observers, to be the greatest improvement that has been made in the town, of late years, the land being now as productive as any like quantity in Topsfield. Some years since it was offered to our Society for premium; only one of the Committee, however, visited it, and, for some informality about the statement, it was rejected.

After Mr. Phillips had so clearly opened the way, I began, ten years since, the work of reclaiming wet meadow and swamp land, with which I was surrounded, being on a peninsula, and joined to him below. I opened a main drain through my meadow, and bedded up, by cross-ditches, about two acres, which I should not do again, the cross-ditches and bedding being unnecessary, grubbing and gravelling being better.

During these ten years, I have grubbed and gravelled over some half dozen acres of wet meadow and swamp land; making, together with that of Mr. Phillips, all in one body, twelve acres, which, from being unproductive, have not failed to produce, taken together, not less than one ton

of hay to the acre, every year since. The hay is not the best stock hay, but sells well in the Boston market.

The meadow, which I now offer for consideration, has been reclaimed about six years. It was covered with bushes ten feet high, which were grubbed and burned, and the land seeded down with herds-grass and red top, and it has produced two tons to the acre every year since the first. This year we estimated, by weighing one load, that the yield was three tons of herds-grass, red top, and other grasses. The expense thirty dollars per acre. Twenty dollars worth of fuel was preserved from two acres, in pine stumps and roots.

Now, if the reclaiming of these half dozen acres within stone's throw of our dwelling, added to as many more adjoining, all in full view of the public highway, and in the heart of the village, is no improvement, so far as dollars and cents are concerned, it is, at least, a relief to the eye, and a gratification to the taste and feelings of every good farmer, who has had opportunity to observe the change. The damage to the health of the neighborhood, which so much stagnant water and putrefaction would make, must be certainly lessened. These reclaimed lands are exempt from some of the foul weeds of uplands. I have never seen white weed, lady's slipper, nor the Canada thistle, on these lands. They will always make good returns for any kind of dressing, and are not affected by the season, but yield better, if anything, in a dry season.

*Topsfield, July 25th*, 1853.

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### J. F. C. Hayes' Statement.

The meadow I have offered for consideration, comprises from one and a half to two acres. One year ago it was a mass of muck and brush — a forsaken spot. It was rendered

wet by heavy springs rising in the margin of the meadow, which, having no particular point of accumulation, kept nearly the entire surface of the meadow in a state of quag-mire. I purchased this lot more for the *water* than the *land:* but, to render the water available, it became necessary to ditch the land. The ditching was commenced August 25th, 1852. As it progressed, I became impressed more and more with the idea of making something of the land. The ditching was completed, including deep cuts in various directions into the surrounding highland, and filling the cuts with stone, at a cost of about one hundred and sixty dollars. The ditch through the low ground probably cost not above fifteen dollars.

The operation of ditching completed, that of clearing the ground of brush and wood was next commenced. This was done with an eye to economy, bordering on parsimony. Every stick, of the size of the workmen's thumb, was trimmed and carted off for firewood. The small brush remaining, was piled and burned. The wood obtained more than paid the expense of clearing and ditching.

Having thus arrived at the *bottom*, my next idea was to put the meadow in a state of cultivation. My Irishman told me that the roots must be pulled out and burned. So also said the farmer, whose opinion I solicited. I was neither a farmer nor the son of a farmer, but I knew something of the nature of soils; and after getting the advice of many, I determined to follow my own inclination. The meadow on the north side of the ditch, I concluded to treat in the usual way; while that on the south side should be treated as I conceived to be the *best* way.

I accordingly commenced covering the stumps on the south side of the ditch with turf, muck and loam taken from the lot adjoining where Lowell street has since been graded. The turf was cut by sharp spades, taken in barrows and placed bottom up, directly upon the top of the meadow.

The loose earth left in taking up the turf, was then spread over the top of this turf, and made level with a hoe. This done, the labor of reclaiming was completed for the time being. In this condition, with no manure, and without ploughing or spading, the ground was planted last spring. It has produced good corn, peas, beans, turnips, ruta-baga, cabbages, carrots parsnips, &c. Indeed, everything has grown luxuriantly, except the onion, the potato grew finely, until the rust put a check to it.

The cost of covering is, perhaps, something greater than that of clearing. But it is the best way, for the reason that whatever ammonia is found in wet land, as is this of mine, like the cream upon a pan of milk, must be near the top. Hence, if we remove the turf, the best portion is taken away. By putting the top of one lot upon that of another, its natural productiveness must be increased. The effect of this mode of procedure, is best told by the produce. The produce of the *covered*, compared with that of the cleared portion of my ground, is at least four to one. The covering process is quite effectual, in killing the growth of most kinds of brush wood. The elder and sweet-briar alone, have made their way through the turf, and coming as they must through several inches of earth, they are easily pulled out by the hand, or yield readily before the hoe. The cost of covering an acre of ground to the depth of six inches, when the run for the barrows is not over fifty feet, on an average for the lot, cannot exceed fifty dollars. The covering of my lot cost even less than this, as the weather was "freezing cold," during most of the time it was being performed, and each man made rapid work for the comfort of it."

Mr. Stowell will carry to the Fair, samples of the various kinds of vegetables raised on the above patch of ground, during the present year. Next year we shall cultivate with the aid of manure, and with more system, apportioning to each vegetable its proper limits.

*Lawrence, Sept.* 10, 1853.

## Mark H. Davis' Statement.

I submit for consideration my operations on one acre of meadow land on the farm of Lewis Allen, in Danvers; that has been under my care and improvement for three years last past.

In July, 1850, I began to invert the sod by the use of a plough, but the mud was so soft, that the oxen could not stand in the furrow. Consequently, I made use of a pair wheels that the oxen might travel on the sward, and then I cut the furrows to the depth of ten or twelve inches. This meadow has a peat-bottom—some parts of it are so soft that I could work only in the driest part of the season. In September 1851, I put a coating of tanner's manure, in which were mingled hair and lime, on about half the lot, and sowed herds-grass and red top thereon. In July, 1852. this part, measuring 70 rods, yielded one and three quarters tons of hay, of first rate quality, as estimated by those who saw it.

In August, 1852, I prepared the remainder of the lot, by applying barn and night manure; the difference was observable all the season—the appearance being much the best where the barn and night manure was used. I have taken from the ditches fifty cart loads of mud that I estimate to be worth fifteen dollars, for upland dressing. The crop was injured the present year, by the heavy fall of rain, about the 25th of May, which caused the water to overflow and stand upon some parts of the land, the effect of which was perceptible all through the season.

| | |
|---|---|
| I have sold 4310 pounds of hay from the land for | $45 96 |
| and have left what I estimate half a ton at | 10 00 |
| Making the entire product of 1853 to amount to | $55 96 |
| The product of the previous year was sold for | 36 00 |
| Amount of product for two years | $91 96 |

I estimate the expense incurred as follows:

| | | |
|---|---|---|
| Labor | $14 00 | |
| Manure | 10 00 | |
| Grass seed | 2 52 | |
| Cutting and making at $2 50 per ton | 11 25 | 37 77 |
| Net income of the land | | $59 41 |

Danvers, Sept. 28, 1853.

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STEPHEN BLANEY'S STATEMENT.

I present for inspection and premium, (if thought worthy of it,) a piece of reclaimed swamp, containing one and a half acres. It is situate in Salem, near the Sheep Pasture, (so called.) About six years since, it was a coarse, rough, unproductive swamp, of alders, blueberries, and other bushes, with as many hassocks and holes as could hardly be counted, and a sufficiency of water to render it impassable for man or beast. These bushes were cut and cleared, and the surface left naked, and as unsightly and forbidding as possible.

Early in September, 1852, I cut a two foot ditch through the centre, to let off the surplus water. I then carried on gravel and loam, from the shores adjoining, about two hundred cart loads, and filled the holes and cavities, so as to make the surface as even as I could. I applied about twelve cords of compost, made of glue grounds and meadow muck, about equal quantities of each; spreading it uniformly over the surface. I employed M. H. Davis, two days, with his team of three cattle, and inverted the sod to the depth of ten inches, and afterwards I picked out the stumps and roots, and smoothed the surface. Eight cords of compost, collected from the refuse about my wool and morocco factories, were then applied and mingled with the

soil, by the use of the harrow. Mr. Davis then sowed it down to grass, using two bushels of red top, and three pecks of herds grass seed. A brush was used to smooth the surface, it being too soft to support the roller. The work was thoroughly and neatly done, and thus far, completed in September last year. The seed sown came up thick and promised well.

In July the present year, I mowed and sold the first crop, being 4 tons 1170lbs., on the ground, at eighteen dollars per ton. Subsequently, I mowed and gathered to my barn, a second crop of two and a half tons, of first quality fodder. The whole amount of hay gathered from this piece, of one and a half acres, in one year, after the turf was inverted, was seven tons, 170lbs., or four and two-third tons to the acre. I estimate the value of this hay, as it now sells at twenty dollars per ton, amounting to $141 70

INCIDENTAL EXPENSES, VIZ:

| | |
|---|---|
| Grubbing, smoothing, and clearing, fifteen days labor, at one dollar per day, | $15 00 |
| Paid Mr. Davis for Ploughing, | 7 00 |
| Compost applied, estimated at | 20 00 |
| Paid for grass seed, | 4 25 |
| Labor in curing the crop, at two dollars per ton, | 16 50 |
| Other services on and about the field, carrying on the manure, &c., say, | 10 00 |
| Total amount of cost of cultivating, | 72 75 |
| Balance, net income for the year, | $68 95 |

I estimate the land worth three hundred dollars an acre, (because it will command that price.) Before I commenced the improvement it yielded nothing. If any of the farmers—for I do not profess to be one—have done better with their lands, I should like to see how it has been done. Those who saw the grass growing, of whom were

several intelligent observers of such culture, spoke of it as being as successful an experiment as they have ever seen.

*Salem, Nov.* 14, 1853.

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## TURNING IN CROPS AS A MANURE.

It is to be regretted that the liberal premiums offered by the Society, to test the value of crops turned in as a manure, should for several years have failed to elicit any well conducted experiment on this subject.

Ploughing-in green crops as a means of fertilizing, has been attended with striking results, and it has the additional advantage of being a highly cleansing process. Weeds of annual growth, very pernicious to cultivated crops, may be by judicious ploughing, very nearly eradicated. The charlick, or wild mustard, which formerly choked any summer grain on the farm of the writer, has, by this means, ceased to be any longer troublesome. By this process, the town of Haverhill, some years since, obtained the Society's premium for a crop of Rye, and it has been continued on their farm ever since, with decided benefit.

Some persons have objected to ploughing light land in summer, that more is frequently lost by the wind blowing off the finer parts of the soil, than is gained by turning in the weeds. But if such land is ploughed while the soil is moist and immediately rolled, this evil will be nearly prevented.

The expense of drawing manure a long distance, in addition to its high price, deters many farmers of small means from purchasing; and much of their land is imperfectly and consequently unprofitably cultivated. Yet most of these persons have teams, which might perform the labor of turning in crops with very little actual cost to the owners, provided they could be assured, by decisive experiments, that the condition of their lands could be improved. And

though it is not probable that land regularly cropped can be enriched, or even kept from deteriorating for any length of time, by any process, without occasionally applying manure, yet it is believed that turning in crops, green or dry, may be found to be an important part of an enriching process.

In Mr. Porter's statement, in 1851, of the management of his farm, we are informed that turning in a clover lay constituted a part of his method of bringing his land to a highly productive state. And as he is still carrying on that system of rotation, it is much to be desired that he would furnish us with a detailed statement, from which might be learned the value of this part of the process. In other portions of the county, and even of our State, a clover lay turned in, has been considered almost essential to the successful cultivation of some soils, and no good reason is known to exist, why it should not be equally beneficial in this county.

In the absence of any claim for premium on this subject, these suggestions are offered, with the hope of inducing some one to furnish us with the result of further experiments.

JOHN KEELY, *Chairman.*

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## IMPROVING PASTURE LAND.

If we rightly understand the object of the Society in offering this premium, it is to collect and diffuse such information upon the management of pasture land, as will give increased attention to the subject of grazing land, and not, as some have thought, to the reclaiming of pastured land for the purpose of tillage. It is a fact obvious to all, that the pastures have been neglected in this County for the last

thirty years, while increased attention has been given to our tillage land. Our pastures have been left to be managed by any boy that was large enough to let down the bars or shut the gate. It will be an object in this report to awaken inquiry upon the subject, rather than to give any particular method for improving our pastures.

What is the cause of the deterioration of our pastures? We think that many of our pastures have been injured by long-continued close feeding. Observation has taught us that twitch grass, that pest of tillage land, will die when closely fed for two or three years; so with many of the grasses in our pastures, if they are not permitted to mature their seed, they die, and moss takes their place. If pastures are so situated that they can be permitted to mature their seed once in three or four years, and are then closely fed, they will produce much more than when they are fed all the season. It is not so much against close feeding that we so much object, as against continuing for a series of years, without giving the pasture any time to rest. We can point to pastures that have been injured, we think, by not being fed close enough at any time; the briers and bushes have outgrown the grasses.

"Change of pasture makes fat calves," is a maxim which contains much sound philosophy, and if its teachings were more heeded, we should have better pastures and cattle. In many of our pastures it is now literally a struggle for life or death between the cow and the grass, from spring to autumn, and often neither has vitality enough to exult in a victory.

But how shall we manage our pasture land? When a farm is so situated that it can all be conveniently ploughed and manured, it may be best to change from pasture to tillage. But upon most of our farms there are portions that cannot be profitably tilled. When such land is covered

with moss, we recommend harrowing it in the spring, or warm days in winter, when the frost is out of the surface from one to two inches, and sowing grass seed. We prefer the harrow rather than the plough for land that is to remain in pasture, believing that nature put the soil right side up for grazing.

In the south-eastern part of the county, the pastures are injured by a weed that is not found to much extent in other parts. We refer to woodwaxen, a plant which will have the sole occupancy of the land wherever it gains a foothold. We know not what resemblance this plant may have to the bush which the Oriental shepherd saw burning in his pasture on Mount Horeb, but we know that this is often burned, but not destroyed.

Another method for improving dry, gravelly land for pasture, is by raising the locust tree. This, unlike most other trees, improves the quality of the grass, and increases the quantity. A strong illustration of the benefit of this tree upon pasture land may be seen upon the farm of John Nichols, in Danvers.

But what shall we do with our cold, rocky, bushy pastures? To improve them by ploughing will often cost more than they will sell for when reclaimed; yet the farmer may be so situated that it may be well for him to reclaim them. We think, however, that there is much land in this county, that is now known by the name of pasture, that might be more profitably used as woodland. Where the white pine and the birch grow up spontaneously, they will in a few years destroy the small bushes, and when the wood is fit to cut, we shall have a pasture which nature has renovated.

In the pastures to which the attention of the Committee has been called, plaster has been used as the means for improving them. It becomes an interesting inquiry to know in what parts of the county, and on what kind of soils, plaster can be profitably used. Both of the pastureswhich we

viewed were elevated, and moist, strong soil upon a retentive sub-soil. We had the impression that plaster was best adapted to dry, poor soils; but from what we have seen and heard this season, we think that it is the best soils that are improved by it. In conversation, a short time since, with a gentleman from Bangor, he said that an accidental experiment, a few years ago, taught him that they had been acting upon a wrong impression in regard to it in that vicinity; that they received the most benefit from plaster on good land, well manured; that a greater proportional increase of crop, was obtained when it was applied in addition to the manure, than when applied alone.

The Committee award

To Joseph How, of Methuen, the 1st prem. of $20 00
To Jacob Farnum, of Andover, the 2d " of 15 00

If the Society shall continue to offer this premium, we would recommend that it be under the direction of the Committee on Farms, so that we may have the benefit of the observation of the Committee for a longer time.

WM. R. PUTNAM, *Chairman.*

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JOSEPH HOW'S STATEMENT.

It is with some hesitation that I offer my pasture lands for premium, as I have previously given my opinion, and partially my experience, which have been published in former reports. But as there has heretofore been no application for premium, and as last year there was no report from the Committee, I therefore concluded to offer my pasture for premium, that we might at least have a report on the subject. And believing as I do, that good pasture land is as profitable as most other lands, at the price at which it is usually valued, that a large proportion is comparatively of

but little income, and that much of it can be profitably improved, it therefore seems desirable that individuals should communicate their experience to others, and it may be expected that some benefits may be derived therefrom.

My pasture contains in all about seventy acres, and is subdivided into smaller pastures by stone wall. The soil may be termed a gravelly loam, with a mixture of stones, and on some of it the stones are so abundant that it cannot be conveniently ploughed. It is somewhat hilly; most of it is rather moist, although there are some dry knolls. Some of it was old bound out pasture forty years ago, and from other portions of it the wood has been taken off at different periods. Some of it was formerly ploughed and planted with corn, without manure, or with a very little compost in the hill, then sowed down to grain and hay-seed, which partially improved the pasture for a short time. We occasionally used some plaster, but fearing that it might essentially injure the land, we used but little.

About twenty years ago, we commenced using it more freely, and for the last few years, have used it on nearly all our pasture every year, or once in two years, at the rate of one and a half or two bushels to the acre. Some of our pasture land is benefited more than others, but all of it is improved more or less.

Some years ago, I purchased about fourteen acres of land, one half of which was coverod with wood and bushes, the other half was an old bound out pasture, which had not been ploughed for twenty-five years. Previously to that time, it had been planted and sowed without manure, until it would hardly pay for cultivation. It had been rented for several years for three dollars per year, and the person that hired considered it a hard bargain. During the seven years, I have sowed it with plaster four or five times, and it is now a good pasture. I think the feed is now worth as much

on one acre, as on the whole piece when I purchased it. But I think it is not what it would have been had it never been ploughed, for land that has once been worn out by excessive tillage without manure, although it may lay uncultivated or pastured for a long series of years, will not be what it would have been, had it never been ploughed. About four acres, which were covered with wood and bushes, have been cleared, the land sowed with plaster, and it is now a first rate pasture, far superior (as might be expected) to the old pasture described above. One cutting of the bushes was sufficient, as it usually is where plaster is used; not that the plaster in any way prevents the growth of the bushes, but a thick growth of grass springing up, the cattle, while feeding it, will also feed the tender sprouts, and soon eradicate the bushes. Bushes, however, that the cattle will not eat, such as sweet fern, hard-hack, ground hemlock, &c., will require occasional cutting, or pulling up by the roots. In the above case, the brush and bushes were not burned, but rotted on the land, which I think is much better than burning. The growth of bushes was whortleberry, hazel-nut, witch-hazel, &c.

On a dry part of the pasture, I spread on last year about three cart loads of mud to the acre, which has improved the pasture, and I think will pay the expense. The mud was taken from a pond hole in the pasture, in August, 1852. It appears to be rotten vegetable matter, not unlike common meadow weed, but not peat.

On some of my other pastures I have used leached ashes, from 150 to 200 bushels to the acre, with good success.

The first of June I had in my pasture thirty-seven cows, four oxen, one yearling heifer and two horses. It was not long, however, before the butchers commenced taking away my beef cows, so that by the time of the severe drought, in August, the number of my cows was considerably reduced. Thus I had a tolerably good supply of feed through the dry

season, and an abundance after the rains commenced. But I cannot state definitely the amount of stock that my pasture would keep through the season. It is desirable that there should be some surplus feed in pastures, as close feeding is injurious, and causes them to deteriorate or bind out.

The increase of the feed is not all the benefit resulting from improving pasture land, for as the quantity increases the quality improves; and if an animal will get fat for the butcher at midsummer, instead of running the whole season, the keeping for one half the season is saved, while the beef usually sells then at a higher price.

*Methuen, Nov. 15th*, 1853.

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### Jacob Farnum's Statement.

I present to your examination two pastures, one with fifteen acres, and the other with twenty-three. May, 1851, I spread one ton of plaster on each pasture. In 1852, the expense of cutting and pulling up savins was about ten dollars. First of May I spread two tons on each pasture. Cost of plaster purchased at Haverhill was $5.50 per ton; cost of drawing and spreading was $2.50 per ton. One pasture is very spongy; the other is dry. I feel encouraged to try more on my other pastures.

*Andover, Nov. 12th*, 1853.

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## COMPARATIVE VALUE OF CROPS AS FOOD FOR CATTLE.

The Committee on the comparative value of crops as food for cattle, have received no statement respecting this subject for the past two years. Being Chairman of that

Committee, I have often been requested by several members of the Society, to give the result of my experience. I feel extremely reluctant in so doing, not because I am not fully satisfied by that result, but because it differs so much from that of able and distinguished agriculturists in other parts of the State. Nevertheless, if this communication should stimulate others to make further experiments, so that we can arrive at the true value of the different kinds of food for cattle, although they may differ much from my own, I shall feel fully compensated for contributing the following.

In the spring of 1850, I sowed forty-two square rods of land to carrots, on which corn was raised for fodder the year previous, ploughing in two cords of well-rotted stable manure. There were sixteen young apple trees growing on the land, which had been set three years; the soil a black, strong loam—the yield was one hundred and fifty-six bushels.

January 1st, 1851, I purchased twelve new milch cows and commenced selling my milk. After the first two weeks, my son observed that he did not have milk enough for his customers by about three gallons per day, and that I had better buy more cows—but, believing as I did at that time, I could easily increase the milk of my present number one quart each per day, by feeding with carrots, I accordingly ordered the man who tended the stock to commence the next morning, (January 15th,) to give two and one half bushels of carrots to the twelve cows, morning and night, for the next seven days. I then enquired of my son how much the cows had increased, and to my surprise, his answer was, not quite two gallons for the week. I then resolved to attend to the feeding myself, and fed the next seven days with hay only. The result was no diminution.

I then fed with carrots as before, the next seven days, and there was less than one gallon increase. I continued the same feed alternately for the next four weeks ending March 12th; during which time the cows fell off some in their milk, but not more than one gallon when fed on hay only, than when carrots were added. The hay used during the trial was first quality English hay, with a small foddering of salt hay in the morning. I continued feeding the same kind of hay night and morning, giving at noon as much rowen hay as they would eat in thirty to forty minutes, which increased the milk more than one quart to each cow daily for the next four weeks. By this time I was fully satisfied it would not pay to raise carrots for milch cows, and that I would try some other method.

In April, 1851, I prepared and sowed the same piece of land with onions, where carrots grew the year previous, using the same quantity of manure. The yield was one hundred and sixty-eight bushels, which I sold for forty-seven cents per bushel, amounting to seventy-eight dollars and ninety-six cents. In November following I bought four tons of shorts in Boston, at nineteen dollars per ton—freight to Bradford one dollar and forty-five cents per ton, making eighty-one dollars and eighty cents, or two dollars and eighty-six cents more than the onions brought. I then had four tons or about four hundred bushels of shorts, costing but two dollars and eighty-six cents more than the one hundred and fifty-six bushels of carrots. I think the labor was no more to raise the onions than the carrots, and the labor less to feed the cows with shorts than with carrots.

December 1st, 1851, I commenced giving my cows from four to eight quarts of shorts each per day, and continued through the winter, except eight days in February I left off feeding four cows with shorts that had been having eigh-

teen quarts per day, and measured the milk the first four days. I found they decreased on an average, three pints each per day. The next four days I fed them with about an equal quantity of rowen and coarse hay, which increased the milk full up to the quantity when fed with shorts.

The next experiment I commenced December 26th, 1852, by selecting three of my best cows as nearly equal in size, condition and goodness as I could.

No. 1, eight years old, dropped her calf Nov. 25th.
No. 2, nine " " " " " " "
No. 3, eight " " " " " Dec. 2d.

I continued the experiment eight weeks, giving to each cow the same money's worth of the different kinds of feed by weight as the same cost at the time, viz: Shorts, twenty-six dollars per ton—Oil meal, thirty dollars per ton—Indian meal, eighty cents per bushel of fifty lbs.—Rye meal, one dollar per bushel of fifty lbs.—giving to each cow fifty-two and a half cents worth per week, seven and one half cents worth per day.

The first week forty-two lbs. of shorts were weighed for each cow, and fed night and morning, being about four and one half quarts each time, wet with six quarts of water, two hours before feeding.

No. 1 gave in the seven days 82 1-2 qts. beer measure.
No. 2 " " " 78 1-4 " " "
No. 3 " " " 79 " " "
Total, 239 3-4 quarts.

Second week, thirty-five lbs. of oil meal were weighed for each cow, wet and fed same as the shorts, being about four qts. per day.

No. 1 gave in seven days 87 1-4 qts.
No. 2 " " " 81 3-4 "
No. 3 " " " 82 1-4 "
Total, 251 1-4 qts.

Third week, thirty-two lbs. thirteen ozs. of Indian meal were weighed for each cow, wet and fed the same, being about three qts. per day.

| | | |
|---|---|---|
| No. 1 gave in seven days, | 85 | qts. |
| No. 2 " " " | 84 1-4 | " |
| No. 3 " " " | 84 | " |
| Total, | 253 1-4 | qts. |

Fourth week, twenty-six and one-quarter pounds of Rye meal were weighed for each cow, being about two and one-half quarts per day, wet and fed same as above.

| | | |
|---|---|---|
| No. 1 gave in seven days | 81 3-4 | quarts |
| No. 2 " " " | 83 1-2 | " |
| No. 3 " " " | 78 1-2 | " |
| Total | 243 3-4 | quarts |

Fifth week, thirty-five lbs. of shorts weighed and fed as before:

| | | |
|---|---|---|
| No. 1 gave in seven days | 76 1-4 | quarts. |
| No. 2 " " " | 78 1-2 | " |
| No. 3 " " " | 74 | " |
| Total, | 228 3-4 | quarts. |

Sixth week, forty-two pounds of shorts weighed and fed as before:

| | | |
|---|---|---|
| No. 1 gave in seven days | 82 | quarts |
| No. 2 " " " | 84 1-2 | " |
| No. 3 " " " | 81 1-4 | " |
| Total | 247 3-4 | quarts |

Seventh week, thirty-two qounds thirteen ounces of Indian meal weighed and fed as before.

| | | |
|---|---|---|
| No. 1 gave in seven days | 86 3-4 | quarts |
| No. 2 " " " | 89 1-2 | " |
| No. 3 " " " | 84 | " |
| Total | 260 1-4 | quarts. |

Eighth week, twenty-six and one-quarter pounds of Rye meal weighed and fed as before.

| | |
|---|---|
| No. 1 gave in seven days | 78 1-2 quarts |
| No. 2 " " " | 83 " |
| No. 3 " " " | 78 3-4 " |
| Total | 240 1-4 quarts |

Three hundred and fifty pounds of English and seventy pounds of salt hay were weighed and fed to the cows each week. When the cows were fed on shorts and rye meal, the whole quantity was consumed. When fed on oil and Indian meal an average of fifty-eight pounds of English hay per week was not consumed.

| | | |
|---|---|---|
| Cost of feeding three cows two weeks on shorts | | $3 15 |
| 750 lbs. English hay, 75 per hundred, | 5 62 1-2 | |
| 140 " Salt " 50 " " | 70 00 | 6 32 1-2 |
| | | 9 47 1-2 |
| Quantity of milk for the two week, | 468 1-2 quarts | |
| Cost of feeding three cows two weeks on Indian Meal, | | $3 15 |
| 692 lbs. English hay 75 per hundred, | 5 18 | |
| 140 " Salt " 50 " " | 70 | |
| | | 5 88 |
| Total | | $9 03 |
| Quantity of milk for the two weeks, | 499 quarts. | |
| Cost of feeding three cows two weeks on Indian Meal, | $3 45 | |
| 602 bls. English hay, 75 per hundred, | | 562 1-2 |
| 140 " Salt " 50 " " | 70 | 588 |
| Total | | $903 |

| | | | |
|---|---|---|---|
| Quantity of Milk for the two weeks, | | | 513 1-2 quarts |
| Cost of feeding three cows two weeks on rye meal, | | | $3 15 |
| 750 bls. English hay, | 75 per hundred, | 562 1-2 | |
| 140 " Salt | " 50 " | " 70 00 | 632 1-2 |
| | | | 947 1-2 |
| Quantity of milk for the two weeks, | | | 484 quarts |

It will be seen from the above experiment that Indian meal possesses the highest value for producing milk, differing however but little from oil meal.

Many farmers object to the free use of grain of any kind, believing such feed to be too stimulating. But my experience is otherwise. I have twelve cows which for the last five years have dropped their calves in the fall of the year, and have been fed during the winter and spring, till they went to pasture, with as much meal or shorts as were used in the above trials, and were uniformly in as good health and better condition than a like number that dropped their calves in the spring, and had no grain of any kind during the year.

It should have been stated above, that my cows are kept in a tight barn, sufficiently ventilated during the days and nights, except when they are turned out to water about nine o'clock A. M. and four o'clock P. M. when they remain out about twenty minutes each time.

WILLIAM F. PORTER, *Chairman.*

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## GRAIN CROPS.

*The Committee on Grain Crops report:*

That the whole number of entries were six; namely, one of barley, two of rye, two of corn and one of mixed crop. The season having been so favorable for the growth and maturing of the corn crop, it was with some surprise that the committee found

so few entries of this staple production. Indeed, we do not remember to have heard so many farmers, as we have this year, say that their corn crop never was better. We only wish that more of these crops had been entered for premium. But the premium of six dollars offered by the Society is hardly large enough to induce farmers to go to all the trouble of the exact measurement of their land and crop, required by the rules. We would suggest that larger premiums and more of them be offered, to excite a spirit of greater competition in this direction. Considering the intrinsic value of this crop and the many uses to which it is applied, and especially considering that as large crops are seldom raised as might easily be raised, the culture of Indian corn should receive more encouragement.

The committee recommend that there be awarded to Wm. F. Porter, of Bradford, for his rye crop, the premium of $6 00

To Amos Poor, jr., of West Newbury, for his corn crop, the premium of 6 00

To Geo. Hayes, of Beverly, for his corn crop, a gratuity of 6 00

To Hermon P. Chandler, of Andover, mixed crop of corn and beans, premium of, 6 00

FRANCIS DODGE, *Chairman.*

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WM. F. PORTER'S STATEMENT.

I offer for premium a crop of Winter Rye, raised on one acre — the soil is of a sandy loam. In the summer of 1851, it yielded about one ton of hay per acre. In September following, it was ploughed eight inches deep, and on the 15th, tenloads of compost manure to the acre were applied, thirty-five bushels to the load. One bushel of rye sowed, covered with the harrow and rolled. On the 12th of July, 1852, it was harvested, and threshed out the last of August, and yielded twenty-eight and three-fourths bushels. On the 23rd

and 24th of September, 1852, the stubble was turned under, and ten loads of compost manure from the barn cellar, of about equal parts loam and cow manure, were applied, one bushel of rye sowed, harrowed and rolled. On the 13th of July last, it was cut with sickle and cradle — bound and carted into the barn the 16th — threshed out the 19th and 20th of August. The yield was thirty-four and five-eighths bushels, of fifty-eight lbs. to the bushel — the weight of the straw was thirty-eight hundred and sixty lbs.

The expense of cultivating the said crop was as follows:

| | | |
|---|---|---|
| For 1 man and 1 pair of oxen 1 day ploughing | 1 67 | |
| Carting and spreading 10 loads of manure the same | 1 67 | |
| Sowing, harrowing twice and rolling, 1 man and 1 pair of oxen 1 day | 1 67 | |
| Cradling, 1 man 1 day | 83 | |
| Binding and carting into barn, 1 man 1 day, 1 pair of oxen ½ day | 1 25 | |
| Threshing, 1 man 3 days | 2 50 | |
| Carting the straw to Haverhill, 1½ miles | 1 50 | |
| | 11 09 | |
| 1 bushel of rye sowed, 1 12, 10 loads of manure 10 00 | 11 12 | |
| | 22 21 | |
| Value of Crop, 34 5-8 bush. sold at 1 12½ per bush. | | 38 95 |
| 3860 lbs. of straw sold at 50 cents per hundred | | 19 30 |
| | | 58 25 |
| | | 22 21 |
| Net profit, | | 36 04 |

Bradford, November 1st, 1853

### George Hayes' Statement.

I wish to enter for premium a crop of corn raised by me on the farm of the late Thomas Bancroft, in Beverly The land contained one acre, as measured by a sworn Surveyor. It had been in corn and potatoes the year previously (1852) but how manured, I am unable to say, as it was then carried on by another person; but the land is of good quality. It was ploughed last spring, and manured in the hill with a compost of barn and hog manure and sea weed — a good shovel-full to the hill. It was planted about the 1st of May, and though so early, the corn came up well, with a good strong growth. It was cultivated and hoed twice thoroughly, and weeded once after haying, so that the ground is left entirely free of weeds. Thorough weeding and stirring of the soil I consider of more importance to secure a good corn crop, than high manuring. The corn was topped about the middle of September, and harvested early in October. It was measured in the ear in bushel baskets, and found to contain 144 baskets of sound ears. The corn has lain in the bin ever since, and this morning two baskets of ears — the same baskets as were used in measuring before — were shelled and found to contain 62 lbs. of shelled corn.

The corn is the eight rowed corn. It was planted three and a half feet apart — five stalks left in a hill — and many of the stalks produced twin ears.

Beverly, November 14, 1853.

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### Hermon P. Chandler's Statement.

I offer for premium one acre of corn and white beans, from which I harvested one hundred and forty-six baskets of ears of corn. Planted in 1852 with corn, — yield about seventy bushels of shelled corn per acre. Ploughed in the fall. It

was manured in the spring of 1853: seven cords of compost manure, two-thirds of it spread and ploughed in, and the remainder put in the hills. Planted the 20th of May with the golden Sioux corn — hills three feet eight inches apart each way — four stalks to the hill. After the corn was up, planted the beans beside each hill of the corn — yield of beans, five bushels. 1st November, I shelled two baskets of ears, which weighed sixty-seven pounds. Allowing fifty-six pounds to the bushel, it makes eighty-seven bushels and twenty-one fifty-sixths. Corn was harvested the 1st of October. The corn was hoed twice, the ground kept level as possible. Stalks cut 1st September. Amount of labor, about eighteen days work — the value of the land, seventy-five dollars per acre.

Andover, November 14, 1853.

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AMOS POOR, JR'S. STATEMENT.

I present for examination one and a quarter acres of corn; where the corn grew grass was mown in 1851; in 1852 it was planted with corn and potatoes and was manured in hills. The present year fifteen cart loads of manure to the acre were ploughed in and a small quantity of manure put in the hills; it was planted four feet between the hills each way; planted the 12th, of May; hoed three times; harvested about the middle of October, and yielded 257 baskets of sound corn, weighing 45 lbs. 10 oz., to the basket, making the whole weight on the acre and a quarter 11725lbs.

WEST NEWBURY, Dec. 5th, 1853.

I hereby certify that I measured a piece of land for Amos Poor, jr., which measured two hundred rods, on which he

raised two hundred and fifty seven baskets of ears of corn the present year, I also weighed one basket full of ears which weighed exclusive of basket 45 lbs. 10 oz. SAM'L ROGERS.

WEST NEWBURY, Nov. 29th, 1853.

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## ROOT CROPS.

*The Committee on Root Crops Report,*

That seven entries for premium were made. They have not had an opportunity of examining any of the crops at any stage of their progress, not having been notified of any entries being made until called together to examine the several statements of the applicants for premium. They do not consider themselves as well qualified for the discharge of their duty as if they had seen the crops during their growth.

They have endeavored to examine the several statements with care, and see no reason to doubt their fairness and truth, as none of them exceeds what might be reasonably expected on a rich soil with the best cultivation. But they are of opinion, that in all like cases a certificate of the measurement of the land, and of the measure and weight of the crop, should accompany the statement. Joseph Longfellow, of Byfield, is entitled to the premium of $6 for his crop of onions. His statement had all proper vouchers. They recommend the premium of $6 to Ephraim Brown, of Marblehead, for his crop of carrots.

DEAN ROBINSON, *Chairman.*

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### J. LONGFELLOW'S STATEMENT.

The crop of onions which I entered for premium has now been harvested, and I herewith transmit the result. From one-half acre of land, measured by G. W. Adams, I have taken 386¼ baskets of ripe onions. I weighed six bas-

kets, the heaviest weighing 59, the lightest 57 lbs. I call them 57, making 440,44 3-4—50 bushels (22,044 3-4 lbs.) About one-half the land has been in onions three years; the remainder one year, except about eight rods on which onions have not been sown until last spring. The crop last year was very much injured by the grub worm, and considerable of the ground was set over with cabbage. The land is a dark, sandy loam, and was not ploughed at all last spring. It was liberally manured with a compost of meadow muck and stable manure, and about five bushels of salt and five bushels of wood-ashes to the acre, and well worked with the cultivator, harrow and hand-rake. The seed (Danvers yellow) was sown about the first of May, three and a half pounds to the acre. The ashes was sown after the seed.

I have not kept an accurate account of the cost of manure and labor on this piece of land, but suppose it has cost me as much as the same would cost any other man, say seventy-five dollars for manure, labor and interest on land. My crop is sold at sixty cents per bushel, delivered at the Depot, one and a half miles from my place of residence.

Byfield, November 7th, 1853.

This is to certify that I assisted in harvesting, topping, measuring and weighing the above lot of onions, and that the above statement is correct.

Byfield, November 7th, 1853. EDWIN VANCE.

NEWBURY, November 7, 1853.

I hereby certify that I measured the ground cultivated as above stated, and it contains one-half acre, and no more.

GEO. W. ADAMS.

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EPHRAIM BROWN'S STATEMENT.

Statement of quantity of onions, Ruta Baga turnips and carrots, raised on one-half acre of land, to each crop, viz:

407 bushels onions, 50 lbs. to the bushel.

460 " turnips, 60 " " "

41,400 lbs. carrots, or 20 tons 2 qtrs. and 400 lbs.

The land on which the above were raised has been planted with root crops and squashes the three past years, and has been manured liberally with compost of rotten kelp, meadow mud and barn manure. The crops have been carefully cultivated — all weeds kept down. The soil is a strong black loam, on the Marblehead Neck.

Marblehead, November 15th, 1853.

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## REPORT ON FOREST TREES, ENTERED FOR THE FAY PREMIUM.

The Committee appointed in 1848, upon the offer made by Richard S. Fay, Esq., of Lynn, for the cultivation of oaks from the acorn, have attended to the duty assigned them, and Report:

That on the 25th of September, 1847, a letter was received from Mr. Fay, through B. T. Reed, Esq., "proposing a prize of one hundred dollars, for the best plantation of oaks, of not less than one acre. The prevailing species to consist of the white and the black or the yellow oaks, to be grown from the acorn planted this autumn or in the spring on land not now under tillage, or in mowing. The prize to be awarded in 1852, and the money, in the meantime, to be placed at interest for the benefit of the successful competitor." In connection with this offer, Mr. Fay remarks, "it will require no great expenditure of time, and no money to enable any person to plant an acre, and the advantage to the person so doing, would far exceed the labor bestowed, even if an unsuccessful competitor." He declines giving any specific instructions as to the planting, thinking "it will be best for every one to follow out their own ideas upon the subject."

Such was the offer, and such were the conditions on which the money was entrusted to the Trustees of this Society, and deposited with the Treasurer.

On the 23d of June, 1848, notice was given to the Secretary, by Dr. Andrew Nichols, of Danvers, that he had a plantation of oaks, situate "on the northwestern brow of Nichols Hill, in Middleton, made about the middle of May, from acorns gathered the last autumn, which had come up well, and the plants were then from one to six inches in height."

This plantation was entered by him for the premium offered by Mr. Fay.

Another entry was made by Mr. Wetherbee, for a plantation made about the same time, on the farm of Mr. Fay, in Lynn.

The Committee visited both of these plantations, in the autumn following, and found them in vigorous and healthy condition; plants sufficiently numerous, varying from three to twelve inches in height.

On the 8th of August, 1850, the following observations were made by the Committee, upon Dr. Nichols plantation. ,' Field rude, rough and briery. Plants varying from one to four feet in height. The English oaks are much ahead of the American, averaging twice the height. The trees stand in hills about five feet apart, numbering about three thousand on the lot. Early in the season the earth was stirred about the trees and vacant spaces were supplied by transplanting from hills that contained more than one; many of those thus moved have failed to grow. Between the hills nature has had full possession, and blackberry and other vines abound, with here and there a bunch of birches or a stray poplar. Some of the English oaks have started ahead at least two feet the present season."

On the 1st of September, 1851, the following observations were made on the same plantation. „ The trees vary from six inches to six feet in height. Most of them are between one and two feet high. Many of them have a vigorous

healthy aspect. Their advance, as a whole, does not come up to our expectations. The Doctor said, if they had not grown, it was their own fault, — as he had done nothing to prevent their growing; — and we may add, he has done little to aid their growth, since the first year. Seven-eighths of the young trees that were first observed in the hills are still living, — many of them so involved in vines and grass as to demand searching observation to distinguish them. The English oaks show the best growth, — the yellow and black oaks the next, and the white oaks stand in the third class for progress."

On the 24th of September, 1852, the following observations were made: "The trees have been permitted to progress in their own way the present season, without any culture whatever. The ground became covered with birches, brilrs, grasses, &c., without limit. A few days ago, all the birches, briers, &c., were cut, and the earth was stirred about the young oaks to the diameter of one foot, — consequently, their position was easily distinguished. They vary in height from six inches to six feet, the greater part of them have not attained a height of more than one foot. No use has been made of the land since the acorns were planted. The Doctor suggested, it might be well, another season, to cut down the plants near the ground, and let new shoots start up, with increased vigor, from the present firmly imbedded roots."

On the 30th of August, 1853, the plantation was viewed by three of the Committee, with several other gentlemen. Its condition was not materially changed, from the description above given. There are trees enough, but a small proportion of them show any inclination to rise in the world.

Upon a view of the foregoing facts, the Committee could see but little encouragement for the growth of forests by planting acorns on such land. In fact, the impression was general, if the land was of any value for any other purpose,

it would not pay for continuing the fence about it for this purpose. Nevertheless, they express the hope, that the proprietor, whoever he may be, will continue the enclosure, clear out the intermediate growth, cut off the plants even with the ground, and give them a chance to start anew another spring. It is much to be regretted, that the Doctor could not have lived to carry through the experiment, and to give the Committee and the public the benefit of his observations on a class of culture, in which he felt a deep interest, and a good degree of confidence. That the experiment has been conducted substantially, in accordance with the views of the donor, there is no room to doubt; that a better growth of the trees might have been secured, by more attention to preparing the land by subsoiling and manuring before planting; and by clean culture during their growth, is equally clear.

In view of all the circumstances, the Committee are of opinion, that the experiment has been so conducted as to entitle the claimant, or his heirs, to the award of the one hundred dollars, with the interest accrued thereon, and they recommend that the same be paid accordingly.

In regard to the plantation made on the farm of Mr. Fay, once visited by the Committee, they were informed that a large part of the trees were thrown out of the ground, or otherwise killed by the frost; and that the plantation was thereby so much injured as not to be worthy of any further attention of the Committee.

Respectfally submitted,

Dean Robinson,
John W. Proctor.

Middleton, August 39th, 1853.

# ESSAY

## ON CATTLE FOR NEW ENGLAND FARMS.

BY J. W. PROCTOR.

Time out of mind, there has been a race of cattle upon our farms, with characteristics so marked as to entitle them to a distinct appellation; which, by common consent, are now known as NATIVES OR NATIVE BREED.

These animals, like the men of New England, all sprung from old England, but both have become so acclimated, that now they may rightfully claim the place of their birth as their home. The territory known as New England was originally granted by the Crown to merchants of Plymouth, in the county of Devon, and it is natural to suppose, when they sailed from Plymouth, they brought with them the Devon breed of cattle. No register was made of such importation, but the marks of the beasts were indelibly impressed, and their *deep red color*, then and now, clearly indicates their affinity to the North Devon cattle, one of the most favored classes known in England.

What class of cattle is best fitted to the farms of New England, taking into view their *cost*, *their feed*, *their uses*, and *their products*, is the theme proposed for consideration. All will readily admit, that the farmer who expects to live by farming must keep within the means at his command, in stocking his farm. There is a fitness of proportion in these things that cannot be deviated from, with impunity. The farmer cannot indulge in fancy stocks. He must procure such as *will pay*, and none others. No farmer can afford to pay more than *two hundred dollars* for any animal to be kept

upon his farm. I venture this assertion as a fundamental maxim to start with. I know there are dealers in stock who argue otherwise, and who *puff up* the value of the animals they have to sell: but I caution those who have to earn their living by the sweat of their brow, to beware of such *puffs*. They bewilder but to betray. They will not bear to be scrutinized.

Massachusetts has ever been under obligations to the adjoining states at the North, for many of the best animals in her stall — especially *oxen for labor*, and *cows for the dairy* — the main purposes for which animals are kept on our farms. To be sure, occasionally a pair of cattle, or a cow, is fed for beef, after they have passed their period of usefulness in the other departments — but this is not the purpose for which they are kept.

Of the comparative value of our native stock for beef, I do not presume to speak, for in this my experience will not warrant the expression of an opinion. If heresay is to be credited, I should suppose the Durhams would have the preference, so far as *size* is taken into view; but whether this size can be attained without a proportionate expenditure for feed, I am not advised. It is of little use to *grow a great calf*, when it costs twice his value to feed him. Many such have come to my knowledge.

It is so fashionable, of late, to regard the Durhams, the Devons, the Ayrshires, the Alderneys, and others, with foreign appellations, as the only stock worthy of notice, that the humble animals springing up on our hills, with no pedigree attached, are shoved one side, or are allowed to occupy only the *lean-to back of the stable*, and to feed upon the *crumbs* that fall from their betters' table. I am not unmindful that there are those, and sensible men, too, who say we have no *native breed of cattle*, and to pretend to call them such is a mistaken idea. I am aware that all our animals had their origin from abroad, but I contend they are now fairly natur-

alized, as much so as are the men of our hills; and who dares deny their birth-right?

I would not be understood as in any manner finding fault with the beautiful animals recently imported, with hair so sleek and forms so symmetrical. I admire their appearance. I am well persuaded much may be learned by tracing their history, and ascertaining the means by which they have been thus perfected. Great credit is due to those careful observers of the laws of Nature who have brought about these improvements, and thereby established principles to be applied by others; and to these public spirited citizens who have given us an opportunity to examine and understand them. While all this may be very well for those who can afford it, it is a movement in which the common farmers cannot participate, to any considerable extent, at least, because they cannot afford it. Farmers, like others, must cut their garments according to their cloth. — What I would say is, *let the same care be used in selecting the best specimens of our native breed of animals, a n the same expense be applied in feeding them, I am yet to be assured that they will be found inferior to the best imported.*

It is not enough that these imported animals have a superiority of mien when first presented; they should be summered and wintered, and pass through the *third* and *fourth generations*, before their merits can be fairly tested. Let them be fed at the same table, and with the same fare, from the beginning to the end of the year, and see how they will come out after this. I have seen them, when first brought forward, assuming an air of consequence, not unlike the whiskered dandy from the city, when he passes the ploughboy from the country, arrayed in his frock and trowsers; but when hitched to the plough, or drained into the pail, this consequential air dwindled into insignificance.

I have witnessed not less than forty plowing matches, with an average of twenty ox-teams in each; bnt I do not remember a single instance where any superiority of power was manifested

in their operations, by the imported over the native cattle. If they possess the power, would it not have been made apparent under such circumstances? I have known attempts to exclude expert ploughmen from holding the plough, but I never knew of any attempt to exclude expert oxen from drawing it, and if I had, I query whether the slow moulded Durhams would have been thus privileged. I have seen the massive Durhams, the descendant of the far famed Denton of Northborough, moving in the ploughing field, side by side with the snug-built, bright-eyed native ox from Sutton — a little more than half as large — and was constrained to say, that the work was quite as well done by the latter as the former. If you were about to select your man for promptness and expertness of labor, would you take the largest to be found? By no means. I have seen the snug-built little manweighing not over one hundred and sixty pounds, who would lay on his back the largest lubber that come along. The same rule applies to oxen for labor.

Our milch cows, for the making of butter and cheese, the primary object for which they are kept on most farms, are certainly not inferior to any others. In expressing this opinion, I take into view their feed as well as their products. I have seen many cows within thirty years, and the very best I have seen have been native. Such was the opinion of Timothy Pickering and John Lowell, gentlemen of as discriminating observation and high character for intelligence and truth as any others. Not speculators in stock — with no prejudices to conquer, or preferences to award. That I may not do injustice to these venerable pioneers in Improvements, who did more in Massachusetts to awaken public attention to the interests of the farmer than all others, I beg leave to quote a single sentence from a report submitted by Mr. Lowell, on milch cows, exhibited at the show in Brighton, October, 1822, when Mr. Pickering was associated with him on the Committee; and I myself was present a stripling looking on. Says he:

"Although the milch cows of Great Britain and the Netherlands are in general far superior to our own, I have never seen an imported cow with equal merit with some of our own, that have been here offered. So fully am I convinced of this truth, as well as that our country possesses a very considerable number of these fine cows, that I am persuaded that if Great Britain or the Netherlands were to send us ten cows selected, each of the best quality there to be found, New England alone would furnish twenty that would equal them in the quantity of milk, butter and cheese they would respectively produce."

This was not a shot at random, by those who did not know what they were aiming at; but it was said by those who knew what they were saying, in a manner most deliberate, and who stood ready to maintain what they had asserted. Let those who have had more experience, and who possess more wisdom, than did these gentlemen, (one of whom was eighty, and the other about seventy at this time) come forth and declare it. I beg leave to refer also, to the discussion carried on between Messrs. Pickering, of Salem, and Powell, of Philadelphia, published in the New England Farmer, in 1825, where the arguments on both sides of this subject are fully drawn out, according to the light then existing, and I think if doubts remain on the minds of any, the perusal of those papers will remove them. I remember to have read them since, with much instruction.

Where can there be found an animal excelling the Oakes cow for butter making properties? I confess I have a local pride in sustaining the reputation of this animal. She was first brought into notice, in the humble town in which I reside. She was a small-sized, ordinary-looking cow, with a small head and neck, straight back, and broad hind parts, with milk vessels of best form and capacity. She was taken when about two years old, by a farmer in Danvers, from a drove on its way from Maine to Brighton, without any

certificate of pedigree, as many as have been taken, and proving to be a good milker, was sold to his brother Oakes, a shoe manufacturer, to afford milk for his family. Her extraordinary butter making qualities coming to the knowledge of E. H. Derby, Esq,, one of the Trustees of the Massachusetts Society, he requested Mr. Oakes, to take account of what she did. This was done in the year 1816 —when from May 17th, (when her calf was killed,) to the 20th of December next following, she yielded yielded sixteen pounds of butter a week, on an average, besides one quart of milk a day for the use of the family. Of the truth of this statement there is not a shadow of doubt. But it may be said, she was high fed, or she never could have done this. So be it. Can it be expected of any animal to create such a produce out of nothing? Suppose a cow to yield twenty quarts of milk a day through the year, how much would be the weight of the milk? If I figure right, 15,600 pounds, or nearly eight tons. Can this be expected of a cow wtihout something to feed on? But the Oakes cow does not stand alone. Several others, in the County of Essex, have come to my knowledge, that yieldsd from seventeen to twenty pounds of butter a week, for several weeks together; but none so large a quantity, for so long a time, as the Oakes cow. These were all natives.

Until well authenticated accounts of better products can be had, I will not yield the claim of our native stock for their butter making qualities, to any class of horns whatever. That the Jersey cattle afford superior milk which will yield more butter from the same quantity, I readily admit; but that they are better stock for dairy purposes, taking into view quantity and quality of milk, and expense of feed remains to be proved. Until proved I must beg leave to doubt.

Of the Jersey cows, so far as I have seen, I entertain an exalted opinion, and believe the best chance of improving

our stock, from abroad, is by the introduction of these animals. Still, for the Jersey bulls I have no particular fancy. I shall not soon forget the manner in which the bull only two years old, imported by Mr. Motley, of Roxbury, applied his horns to his owner. I saw him a few weeks after this, and am free to say, that if animals with such propensities were to be about my premises, I should wish to be away from home. Who could forgive himself if his son or servant was permanently maimed, by such an animal? Ask John Taylor of Franklin, what estimate he puts on Hungarian Bulls? Not for all the celebrity ever attained by the most celebrated owner of this animal, would I run the risk that John Taylor ran. Animals or men with *such pugnacious bumps*, be they from *Hungary* or elsewhere, had better remain at home. Our railroads and steam engines kill fast enough, without having living machines in our barn yards, for this purpose. Animals thus dangerous should not be kept. It is as bad to keep a bull that *gores*, as a dog that *bites*.

Notwithstanding the merits of the improved breeds as they are called, have been proclaimed abroad for forty years or more, and unwearied efforts have been made to diffuse them they are rarely found in the barn yard of the common farmer. Why is this? These farmers generally understand on which side their bread is buttered, and how to make the butter for their bread. Would it be so, if these cattle were really better adapted to their uses? The fact that they do not seek to obtain them, and when they get them, they do not try to keep them, speaks louder than volumes of argument.

Without doubt, benefit may accrue from crossing the best of imported animals with the best of our own. This was recommended by Messrs. Pickering and Lowell, before named; and this has been recommended by all intelligent men who have given attention to the subject. This has been attempted by the Massachusetts Society for the Promotion of Agriculture. At great expense they have im-

ported animals, selected with the best of care for this purpose. They have generously placed them in the different Counties of the Commonwealth, and called on the farmers to take advantage of their offers. From some of the Counties they have had favorable returns — Worcester in particular —but generally not so. In Essex, I reme mber, we were favored with the offer of a bull. After deliberation by the Trustees, they concluded to take an Ayrshire animal, and appointed two of their most experienced men from the best stock raising towns, Andover and Newbury, to select him. He was received with all thankfulness—kept at an expense of about two dollars a week — stationed in different towns, and advertised in the Gazette, for a period of two years, and finally died and was buried without ceremony. You may ask what was the result of all this? According to the best information I can obtain, some of his progeny were fair looking animals, but as a whole, the value of all that remain, distinctly marked as his descendants, would not pay the expense of his keeping. The inference must be, that the farmers did not think much of the animal or that he was not worth keeping. I speak of this animal, because I happened to know his entire history; like unfavorable accounts I have heard from other Counties. Although thousands of dollars have been expended by the Massachusetts Society, in introducing and spreading abroad foreign animals, I have great doubts whether any benefits have resulted from these operations.

Twenty-five years ago, Gorham Parsons, Esq. at the solicitation of Col. Pickering, then President of the Essex county Society presented the Society with an Alderney Bull, of superior promise. He was stationed at West Newbury, on the farm of Mr. Newell, where he remained for several years, and was favorably regarded. I am informed by that gentleman that his progeny still remain in the town, and that they have some of the peculiar haracteristics of the race, especially in the *quality* of their milk,

clearly showing, what has been asserted by Col. Jaques and other growers of fancy animals, that the influence of the *male* in raising good stock for the dairy, is quite as important as that of the *female*. Farmers who presume to keep an inferior brat of a bull as the associate of their cows, make a great mistake. Keep well formed bulls only, and such as have come from cows of good character for milk, both *quantity* and *quality* — the *latter* is quite as important as the *former* for all purposes, except for sale in the market, and for that also, when *the tricks of the trade* are fully un rstood.

It was a favorite notion of Col. Pickering, to improve our dairy stock, by rearing the offspring of those cows which had proved good, and by giving premiums for such, and such only. And to do this, to give encouragement to those who would bring forward the offspring of such cows, when they arrived at maturity. But so little of system is there in the movements of our Agricultural Societies, governed by officers chosen *annually*, and by committees of a mushroom's growth—*here to-day and gone to,morrow*— hat I am not able to say, that any decided benefit resulted from these offers, though, it is easy to see that they embrace the onl rational mode of bringing about valuable improvements. Suppose Coke or Bakewell had operated with as little regard to system as we do, when would their improvements have been perfected? The truth is, if we would have anything valuable we must labor for it. There is no propriety in awarding premium for animals that *chance to be good*. It is those which are made good by care and attention that are to be rewarded, and those only.

A short time since, I visited the farm of a gentleman, adjoining the farm of my father, who has spared no effort to secure a superior dairy stock. He had Durhams, Devons and Natives, with an expectation of Alderneys, all at the highest prices, averaging not less than $75 an animal. On inquiry of his herdsman, which was the best cow for milk in the yard, (and there were a dozen or morethere,) the answer was, " that darkcolored, crumpled horn,

raw boned, ill looking cow—she gives more and better milk than any cow in the yard." After what I have said, it is perhaps unnecessary for me say, she was a native. I appeal to farmers, whether they have not witnessed something of the same kind in their own herds. He that selects an animal for milk because her form is comely, or her face beautiful, is in great danger of being deceived in his choice. There are other indices of quality much more certain, not omitting the far famed escutcheon index of Guenon—of which I have heard much, and know little — but what I do know, is decidedly in its favor. No man who would have a good dairy stock, should be unmindful of this sign.

On a recent visit to the farm of Mr. Payson of Rowley, he informed me that within ten years last past, he had examined and carefully tested the qualities of more than one thousand milch cows of every name and variety, and he frankly stated, that the best milkers he had ever met, take them individually or as a class, came from the droves gathered in Maine or New Hampshire. In selecting these animals, he had regard to their external characteristics mainly, their form, their build, their general expression, such as an experienced eye embraces, although there may be no word to give it. Said Mr. Payson, "when the merits of imported animals have been blazoned abroad and the defects of native carefully exaggerated, I have sometimes thought, that the sin of the owner was laid at the door of the brute beast. No matter by what name your cattle are known, or how complicated may be their pedigree, so long as they are not well fed and cared for, they will be no better than the ill formed native stock, which in many places, like the lean kine of Pharoah, seem to be forsaken of God, and abused by man.' At the same time, as I passed through his extended barns, I saw a young Jersey Bull, recently obtained of Mr. Motley, from the Massachusetts importation, at a cost proportioned to his reputation, carefully boxed up in the barn, and fed on the best that could be furnished; while natives of the same age, were gnawing the parched herbage on gravelly knolls, with no one to sympathize in their short comings. Why this distinction in the treatment of these animals? How

does this compare with the gentleman's remark just quoted, from his truly sensible address before the County Society? The fact is, these animals cost more, therefore, according to the rule laid down by Hudibras, they are taken to be worth more.

"The worth of a thing
Being so much money as it will bring."

Our farmers cannot afford to feed stock as these imported animals require to be fed. In 1848, Mr. Phinney, of Lexington, who had the stock of the State Society in his keeping, reported their bill of fare to be 20 lbs of English hay, two quarts of Indian meal, and a peck of carrots to each animal over one year old, daily. This report was sanctioned by the Trustees of the State Society and endorsed by Abbott Lawrence and others, whose authority as indorsers, will not anywhere be questioned. Let us look at this feed and see for what it can be afforded. 20 pounds of hay must cost at least 15 cents, 2 quarts of Indian meal at least 5 cents, a peck of carrots at ast 5 cents, the care of the animal at least 5 cents, so that the daily board and keeping will be 30 cents, or with a little nipping on Sunday, two dollars a week. What farmer can afford to keep cows thus, when the returns of a good dairy stock, as they average, are not equal to more than half this amount? It is a good herd of milking cows, where the cows on an average yield milk that sells for $5 a month through the year. Farmers cannot afford to keep cows whose milk will not pay for their feed. There must have been some misapprehension on the part of Mr. Phinney, who was reputed to be fully informed in the mysteries of farming like a gentleman, or else the class of animals, he had in keeping, will not answer for New England farms. Facts are stubborn things, as every man who attempts to live by farming, sooner or later learns.

In confirmation of the foregoing views, I beg leave to quote a part of a letter, written to me on the 8th of Augnst last, by the "model farmer" of Plymouth County, a gentleman of as much experience and observation in farming as any other in Massachusetts, at the present time. "It is," says the Hon. Mr. Allen, "the work of time to determine the true character of im-

ported animals. They are long affected by the change from the milder climate of Europe to that of New England. When these animals become partially acclimated, and pass from the provident care and critical attention of the importers to some purchasers with extravagant expectations, another trying change is passed and defects not unfrequently ascribed to the animal which should be accounted for from the management. Has it not been by some process like this, that the Ayrshire cows have fallen into disrepute? The points in those animals certainly indicate an aptitude to secrete milk. The Durham cattle are pronounced by many to be too tender for this climate, but with proper attention they are profitably raised for beef; and crosses with this breed have given us some fine cows, and decent working oxen — more remarkable, however, for size than any other quality. The greatest benefit which has been realized from imported cattle, has been realized in crosses with those called native. This, if judiciously pursued, will tend to preserve a healthy and thrifty race. As at present advised, I should prefer to have the Devon blood predominate. Strength of constitution to endure the rigors of the climate, and susceptibility of taking on flesh with ordinary feed, are greater objects with the generality of farmers, than merely size. Probably there is a mixture of all the blood now found in Europe in what we call native stock. Systematic crossings will, no doubt, produce the most profitable race for the yoke, the dairy and the market."

**Dr.** **William Sutton, Treasurer, in account with the Essex Agricultural Society.** **Cr.**

| | | | | | | |
|---|---|---|---|---|---|---|
| 1852. | | | | 1852. | | |
| September. | To Balance of former account, | | $297 18 | September. | By Amount of Premiums and Gratuities, awarded by the Trustees, | $661 00 |
| October. | To State Bounty received, | | 600 00 | 1853. | | |
| " | To net proceeds of Exhibition, at Lawrence, received of R. P. Waters, per account, | | 631 67 | September. | By Expense Account, as follows:— | |
| " | To Amount received of Charles A. Stetson, | | 40 00 | | Exhibition, 1852, $281 87 | |
| 1853. | | | | | Printing, 262 22 | |
| September. | To Amount of Bank Dividends, received in October, 1852, and April, 1853, | | 466 38 | | Secretary's Salary, 75 00 | |
| " | To Interest on Essex Railroad Bonds, | | 42 00 | | Postage, Freight, &c., 17 29 | |
| " | To Amount received of New Members, | | 129 00 | | | 636 38 |
| " | To Interest on Loan, | | 19 14 | " | By Amount paid for Colman Library Account, | 29 75 |
| " | To Premiums unclaimed, | | 80 50 | " | By Balance of Cash on hand, | 978 74 |
| | | | $2,305 87 | | | $2,305 87 |

## FUNDS BELONGING TO THE SOCIETY.

| | | | | | |
|---|---|---|---|---|---|
| 13 | Shares in Warren' Bank, | cost | $1,296 00 | Notes Receivable, | $818 59 |
| 12 | " " Exchange " | par | 800 00 | Essex Railroad Bonds, par | 700 00 |
| 22 | " " Commercial " | cost | 1,471 66 | Cash on hand, as above, | 978 74 |
| 7 | " " Mercantile " | par | 700 00 | | |
| 6 | " " Merchants' " | par | 300 00 | Funds in 1853, | $9,336 24 |
| 5 | " " Village " | par | 500 00 | Funds in 1852, | 8,654 68 |
| 3 | " " Salem " | par | 300 00 | | |
| 15 | " " Danvers " | cost | 1,471 25 | Gain, | 681 56 |

SALEM, September 27, 1853. E. E. **WILLIAM SUTTON, Treasurer.**

*Salem*, November 28th, 1853. The subscribers have examined this account, and find the same correctly cast and well vouched.

ASAHEL HUNTINGTON.
R. S. DANIELS.

# OFFICERS OF THE SOCIETY,

CHOSEN SEPTEMBER 29, 1853.

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MOSES NEWELL, West Newbury, *President.*
JOSIAH LITTLE, Newburyport, } *Vice-Presidents.*
JOSIAH NEWHALL, Lynnfield, }
ANDREW DODGE, Wenham, }
WILLIAM SUTTON, Salem, *Treasurer.*
ALLEN W. DODGE, Hamilton, *Secretary.*

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## HONORARY TRUSTEES.

| | | | |
|---|---|---|---|
| Frederick Howes, | Salem. | Gardner B. Perry, | Groveland. |
| Ebenezer Mosely, | Newburyport. | John W. Proctor, | Danvers. |
| James H. Duncan, | Haverhill. | | |

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## TRUSTEES.

| | | | |
|---|---|---|---|
| Lewis Allen, | Danvers. | Royall A. Merriam, | Topsfield. |
| John Alley, 3d, | Lynn. | Wingate Merrill, | Danvers. |
| Hazen Ayer, | Salem. | Joel Nourse, | Lynn. |
| Otis Bailey, | Andover. | William Osborne, | " |
| Jacob Brown, | Ipswich. | Thomas E. Payson, | Salem. |
| Jonathan Berry, | Middleton. | Moses Pettengil, | Topsfield. |
| David S. Caldwell, | Newbury. | William F. Porter, | Bradford. |
| David Choate, | Essex. | William R. Putnam, | Danvers. |
| Jeremiah Coleman, | Newburyport. | Dean Robinson, | West Newbury. |
| Josiah Crosby, | Andover. | James Stevens, | Andover. |
| Moses G. J. Emery, | Haverhill. | John Stone, Jr., | Marblehead. |
| N. W. Harmon, | Lawrence. | Nathan Tapley, | Danvers. |
| Joseph How, | Methuen. | Horace Ware, Jr., | Salem. |
| John M. Ives, | Salem. | Richard P. Waters, | Beverly. |
| John Keely, | Haverhill. | Enoch Wood, | Boxford. |
| William M. Kimball, | Lawrence. | | |

## MEMBERS ADMITTED IN 1853.

| | |
|---|---|
| Joseph H. Adams, | Andover. |
| George A. Abbott, | " |
| Nathaniel Ambrose, | Lawrence. |
| William H. Balch, | Topsfield. |
| Stephen Blaney, | Salem. |
| Asa M. Bodwell, | Lawrence. |
| Frederick Boyden, | Topsfield. |
| Increase Brown, | Marblehead. |
| Oliver Bryant, | Lawrence. |
| Brackett H. Clark, | " |
| Joseph F. Clark, | " |
| Henry B. Cloutman, | Marblehead. |
| Joshua Coffin, | Newbury. |
| Homer A. Cook, | Lawrence. |
| Benjamin Davis, | Newburyport. |
| Charles M. Davis, | Newbury. |
| Samuel H. Elliott, | Lawrence. |
| Moses G. J. Emery, | Haverhill. |
| George Emery, | West Newbury. |
| Joseph Fairfield, | Danvers. |
| Jacob Farnum, | Andover. |
| James Flint, | Middleton. |
| Charles French, | Andover. |
| David L. Goodridge, | West Newbury. |
| Samuel H. Green, | Ipswich. |
| Daniel F. Harriman, | Boxford. |
| George W. Hills, | Lawrence. |
| Harrison G. How, | " |
| Albert Jenkins, | Andover. |
| John B. Jenkins, | " |
| Samuel Jenkins, | Bradford. |
| Robert Jewett, | Newbury. |
| E. G. Kelly, | Newburyport. |
| William M. Kimball, | Lawrence. |
| William D. Lamb, | " |
| John H. Manning, | Andover. |
| Samuel Merrill, Jr., | Newburyport. |
| Marcus Morton, Jr., | Andover. |
| T. P. Munday, | Topsfield. |
| Adam Nesmith, | Beverly. |
| Charles Newhall, | Lynn. |
| Benjamin S. Newhall, | Salem. |
| Cyrus K. Ordway, | West Newbury. |
| Nathan Page, Jr., | Danvers. |
| Charles Perley, | Boxford. |
| William Peters, | Andover. |
| Willard P. Phillips, | Salem. |
| James Poor, | Andover. |
| William B. Richards, | Georgetown. |
| Sumner Southwick, | Danvers. |
| William N. Spinney, | Lynn. |
| Daniel Stickney, | Groveland. |
| Paul Titcomb, | Newbury. |
| Daniel G. Todd, | Rowley. |
| Albert Warren, | Lawrence. |

# LIST OF PREMIUMS, &C.

.....

## PLOUGHING — DOUBLE TEAMS.

| | |
|---|---|
| Frederick Simonds, Andover, first premium, | $8 00 |
| Jacob Farnum, Andover, second premium, | 7 00 |
| John B. Jenkins, Andover, third premium, | 6 00 |
| Samuel Furber, Andover, fourth premium, | 5 00 |
| Richard S. Bray, Newbury, fifth premium, | 4 00 |

## PLOUGHING — SINGLE TEAMS.

| | |
|---|---|
| J. Longfellow, Newbury, first premium, | 7 00 |
| Robert Jewett, Newbury, second premium, | 6 00 |
| Wm. H. Walecott, Danvers, third premium, | 5 00 |
| Jesse Kimball, Andover, fourth premium, | 4 00 |
| Jedediah H. Barker, Andover, fifth premium, | 3 00 |

## PLOUGHING — HORSE TEAMS.

| | |
|---|---|
| Wm. B. Richards, Georgetown, first premium, | 25 00 |
| John, and Albert Jenkins, Andover, second premium, | 15 00 |
| Henry B. Cloutman, Marblehead, third premium, | 10 00 |
| Eben. D. S. Bryant, and James Nason, Newbury, gratuity, | 5 00 |

## WORKING OXEN.

| | |
|---|---|
| Samuel Jenkins, Bradford, first premium, | 10 00 |
| Richard S. Bray, Newbury, second premium, | 8 00 |
| Charles M. Davis, Newbury, third premium, | 6 00 |
| Robert Jewett, Newbury, fourth premium, | 4 00 |

## BULLS.

| | |
|---|---|
| Dean Robinson, West Newbury, first premium, | 7 00 |
| William Cutler, Andover, second premium, | 6 00 |
| Benj. H. Farnum, Andover, third premium, | 5 00 |

## BULL CALVES.

| | |
|---|---|
| Edward S. Parker, Groveland, gratuity, | 2 |
| Edwin Sargent, Lawrence, gratuity, | 1 |

## FAT CATTLE.

| | |
|---|---|
| Joseph How, Methuen, first premium, | 10 00 |
| Moody Andrews, Topsfield, second premium, | 8 00 |
| Jacob Farnum, Andover, third premium, | 5 00 |

## MILCH COWS.

| | |
|---|---|
| Sumner Southwick, Danvers, first premium, | 10 00 |
| James Poor, Andover, second premium, | 9 00 |

## HEIFERS — TWO YEARS OLD.

| | |
|---|---|
| Ezra Merrill, Andover, first premium, | 5 00 |
| Dean Robinson, West Newbury, second premium, | 4 00 |
| Otis Bailey, Andover, third premium, | 3 00 |

## YEARLING HEIFERS.

| | |
|---|---|
| Rufus Slocumb, Haverhill, first premium, | 4 00 |
| James Poor, Andover, second premium, | 3 00 |
| Josiah Lovett, 2d, Beverly, third premium, | 2 00 |

## STEERS—THREE YEARS OLD.

| | |
|---|---|
| David S. Caldwell, Newbury, first premium, | 7 0 |
| David S. Caldwell, Newbury, second premium, | 6 0 |

## STEERS—TWO YEARS OLD.

| | |
|---|---|
| David S. Caldwell, Newbury, first premium, | 6 00 |
| Alfred Kimball, Bradford, second premium, | 4 00 |

## YEARLING STEERS.

| | |
|---|---|
| Richard S. Bray, Newbury, first premium, | 4 00 |
| Joseph Kittredge, Andover, second premium, | 3 00 |

## STALLIONS.

| | |
|---|---|
| William Peters, Andover, second premium, | 10 00 |

## BREEDING MARES.

| | |
|---|---|
| William R. Page, Lawrence, first preminm, | 6 00 |
| David S. Caldwell, Newbury, second premium, | 4 00 |

## DRAFT HORSES.

| | |
|---|---|
| William M. Kimball, Lawrence, first premium, | 6 00 |
| William M. Kimball, Lawrence, second premium, | 4 00 |

## COLTS — FOUR YEARS OLD.

B. F. Jenkins, Andover, first premium, - - - 6 00
Henry Barker, Andover, second premium, - - - 4 00

## COLTS — THREE YEARS OLD.

Thomas E. Payson, Rowley, first premium, - - 5 00
Moody Bridges, Andover, second premium, - - - 3 00

## COLTS — TWO YEARS OLD.

J. A. Berry, Middleton, first premium, - - - 4 00
J. W. Andrews, Boxford, second premium, - - - 2 00

## YEARLING COLTS.

George W. Sawyer, Boxford, first premium, - - 3 00
Jesse Smith, Haverhill, second premium, - - - 1 00

## SWINE.

Cyrus K. Ordway, West Newbury, boar, first premium, 5 00
Moses J. Stevens, Andover, boar, second premium, - - 3 00
Joseph Kittredge, Andover, breeding sow, first premium, 5 00
John S. Hill, Newbury, breeding sow, second premium, - 3 00
John S. Hill, Newbury, weaned pigs, first premium, - 6 00
Joseph Kittredge, Andover, weaned pigs, second premium, 3 00

## SHEEP.

William F. Porter, Bradford, first premium, - 6 00
Jacob Farnum, Andover, second premium, - - - 5 00

## BUTTER.

Charles P. Preston, Danvers, first premium, - - 10 00
Jonathan Berry, Middleton, second premium, - - - 8 00
Charles P. Preston, Danvers, third premium, - - 6 00

## FARMS.

Josiah Crosby, Andover, third premium, - - 20 00

## RECLAIMED MEADOWS.

Stephen Blaney, Salem, first premium, - - - 15 00
Adino Page, Danvers, second premium, - - - 10 00
M. H. Davis, Danvers, third premium, Colman's European Agriculture.

## IMPROVING PASTURES.

Joseph How, Methuen, first premium, - - - 20 00
Jacob Farnum, Andover, second premium, - - - 15 00

## OAKS ENTERED FOR FAY PREMIUM.

| | |
|---|---|
| Andrew Nichols, or his heirs, Danvers, premium, | 136 00 |

## GRAIN CROPS.

| | |
|---|---|
| Amos Poor, Jr., West Newbury, premium, | 6 00 |
| George Hayes, Beverly, gratuity, | 6 00 |
| Hermon P. Chandler, Andover, premium, | 6 00 |
| William F. Porter, Bradford, premium, | 6 00 |

## ROOT CROPS.

| | |
|---|---|
| Joseph Longfellow, Newbury, premium, | 6 00 |
| Ephraim Brown, Marblehead, premium, | 6 00 |
| By the Committee on Poultry, | 27 00 |
| " " " Vegetable, | 30 00 |
| " " " Fruits, | 46 50 |
| " " " Flowers, | 22 00 |
| " " " Leather, and Articles therefrom, | 30 00 |
| " " " Cloth and Hosiery, | 4 00 |
| " " " Counterpanes, Carpets and Rugs, | 29 75 |
| " " " Fancy Articles, | 47 75 |

## MILEAGE.

| | |
|---|---|
| Orlando Abbott, Andover, one pair Fat Cattle, | 80 |
| Jacob Farnum, Andover, Fat Ox, | 40 |
| Wm. F. Porter, Bradford, one pair Fat Cattle, | 1 28 |
| J. W. Andrews, Boxford, one pair Fat Cattle, | 96 |
| Hiram Young, Newbury, one pair Fat Cattle, | 2 88 |
| Charles M. Davis, Newbury, Heifer, | 1 44 |
| Nathaniel Peabody, Bradford, one pair Steers, | 1 28 |
| Jacob Farnum, Andover, four pair Steers, | 3 84 |
| Daniel D. Dailey, Newbury, one pair Steers, | 2 88 |
| Stephen J. Chase, Newbury, Stallion, | 1 28 |
| Jeremiah Coleman, Newbury, Mare, | 1 28 |
| Andrew Dodge, Wenham, Mare, | 2 00 |
| Samuel Jenkins, Bradford, Mare, | 64 |
| Jacob Farnum, Andover, Colt, | 40 |
| Grayton Reynolds, Andover, Colt, | 40 |
| G. W. Tucker, Andover, Colt, | 40 |
| Wm. Ingalls, Andover, Colt, | 48 |
| Charles Perley, Boxford, Colt, | 48 |
| Total, | $ 882 12 |

## RECAPITULATION.

### FARMS, &c.

| | | | | |
|---|---|---|---|---|
| Amount awarded for | Farms, | $ 20 00 | | |
| " " | Ploughing, | 110 00 | | |
| " " | Reclaiming Meadows, | 25 00 | | |
| " " | Improving Pastures, | 35 00 | | |
| " " | Raising Oaks, | 136 00 | | |
| | | | | $326 00 |

### FARM STOCK.

| | | | | |
|---|---|---|---|---|
| Amount awarded for | Bulls, | $21 00 | | |
| " " | Working Oxen, | 28 00 | | |
| " " | Steers, | 38 00 | | |
| " " | Milch Cows, | 19 00 | | |
| " " | Heifers, | 22 44 | | |
| " " | Fat Cattle, | 29 32 | | |
| " " | Horses, | 65 36 | | |
| " " | Swine, | 25 00 | | |
| " " | Sheep, | 11 00 | | |
| " " | Poultry, | 27 00 | | |
| | | | | $286 12 |

### FARM PRODUCTS.

| | | | | |
|---|---|---|---|---|
| Amount awarded for | Indian Corn, | $12 00 | | |
| " " | Indian Corn and Beans, | 6 00 | | |
| " " | Rye, | 6 00 | | |
| " " | Carrots, | 6 00 | | |
| " " | Onions, | 6 00 | | |
| | | | | 36 00 |
| " " | Butter, | $24 00 | | |
| " " | Vegetables, | 30 00 | | |
| " " | Fruits, | 46 50 | | |
| " " | Flowers, | 22 00 | | |
| " " | all other objects, | 111 50 | | |
| | | | | 234 00 |
| | | | | $882 12 |

### TOWNS AND CITIES IN WHICH THE ABOVE PREMIUMS AND GRATUITIES WERE DISTRIBUTED, AND AMOUNT TO EACH.

| | | | |
|---|---|---|---|
| Amesbury, | $ 50 | Marblehead, | $ 18 50 |
| Andover, | 209 47 | Methuen, | 47 00 |
| Beverly, | 10 75 | Middleton, | 14 50 |
| Boxford, | 7 44 | Newbury, | 88 26 |
| Bradford, | 29 20 | Newburyport, | 7 00 |
| Danvers, | 185 50 | Rowley, | 5 00 |
| Georgetown, | 34 50 | Salem, | 38 50 |
| Groveland, | 13 00 | Topsfield, | 14 50 |
| Haverhill, | 8 50 | Wenham, | 3 00 |
| Lawrence, | 118 50 | West Newbury, | 22 50 |
| Lynn, | 5 50 | | $882 12 |
| Lynnfield, | 50 | | |

ALLEN W. DODGE, *Secretary.*

Hamilton, Dec. 6, 1853.

## INVENTORY OF THE SOCIETY'S PROPERTY.

| | | |
|---|---|---|
| 78 | Cattle Pens, $10 each, | $780 00 |
| | Poultry Stands, | 12 00 |
| | Tables for Exhibition Hall, | 50 00 |
| | Glass Case for Exhibition Hall, | 4 00 |
| 2 | Trunks for Maces, Tickets, &c., | 3 00 |
| 26 | Batons for Marshals, | 3 00 |
| | Lot of Cloth for Show Tables, | 3 00 |
| 2 | Library Cases, | 50 00 |
| 600 | Books and Pamphlets in Library, | 300 00 |
| | Dynamometer, | 15 00 |
| | | $1,220 00 |

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# LIBRARY.

The Library of the Society is kept at the Court House, in Salem. The Secretary acts as the Librarian, and will deliver books under the following regulations:

1. Each member shall be entitled to take from the Library two volumes, on signing a receipt for the same, and agreeing to be accountable therefor.

2. No member shall keep any book more than two weeks, after being notified by the Librarian that the same is wanted by another member.

3. All books belonging to the Library, shall be returned on or before the 15th of November, in each year; that the same may be examined, and the condition of the Library reported to the Trustees.

4. Any member who shall neglect or refuse to conform to these regulations shall forfeit the privilege of taking books from the Library.

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NOTE.—All who have paid the initiatory fee of three dollars towards the funds of the Society; all who have received certificates of membership by order of the Trustees; and all ordained ministers of the gospel, resident within the county, are considered as members. Editors of newspapers published in the county, are also, by vote of the Society, entitled to the privileges of the Library.

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# AND TREES,

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| White Portugal Onion; | Early Frame " |
| Yellow, or Silver Skin do.: | Gherkin (for pickling)" |
| Deep Red do.; | Large Red German Cabbage; |
| Royal Cape Lettuce: | Green Globe Savoy " |
| Early Flat Turnip; | Early Drumhead " |
| Red Top " | Early Low Dutch " |
| Squash Peppers; | Early York " |
| Silver Skin Parsnip; | Early Sugar-loaf " |
| Autumnal Marrow Squash; | Red Dutch (for pickling) " |

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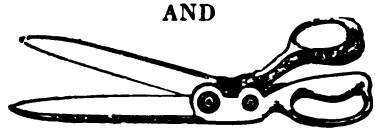

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